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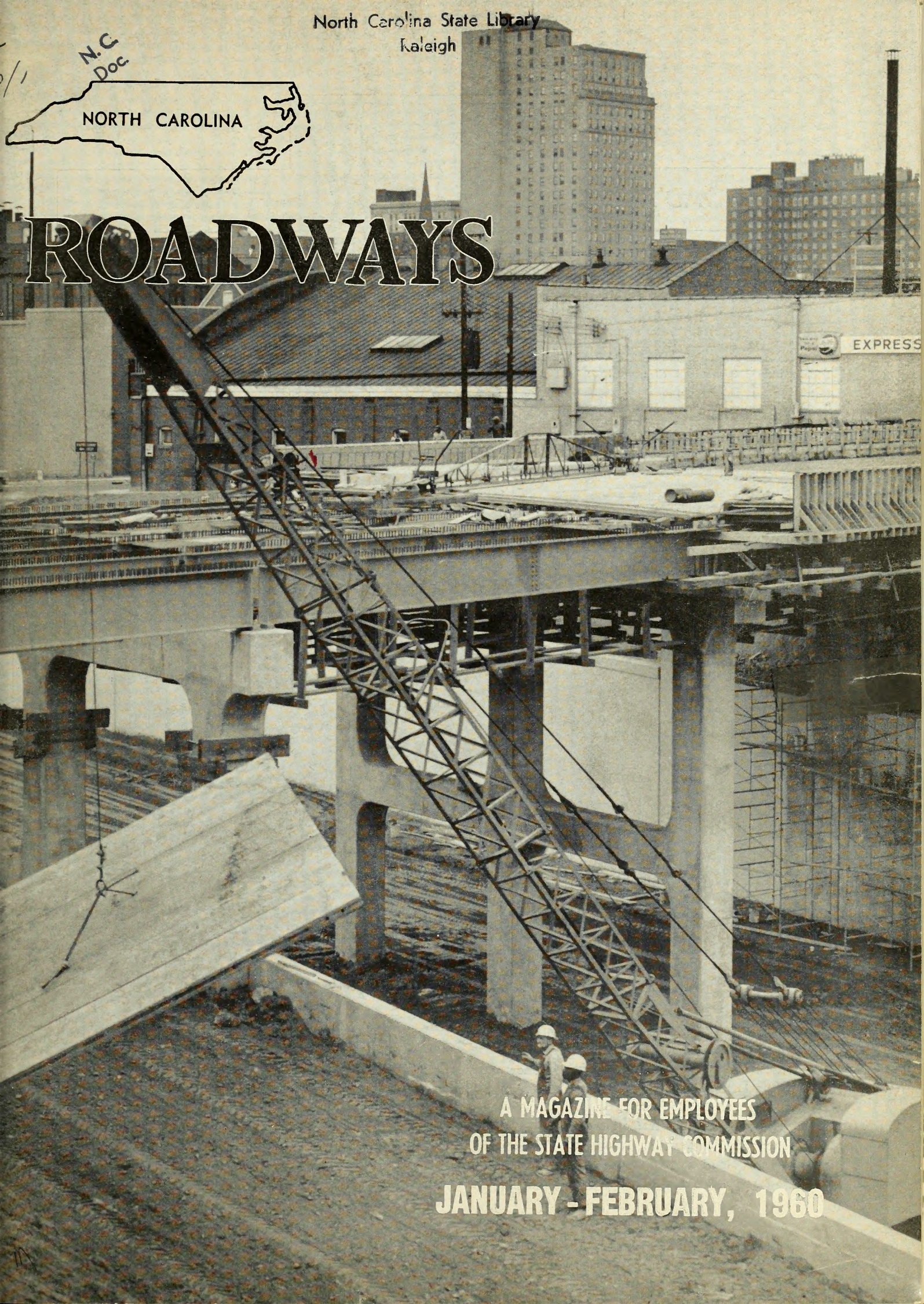


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ROADWAYS



A MAGAZINE FOR EMPLOYEES
OF THE STATE HIGHWAY COMMISSION

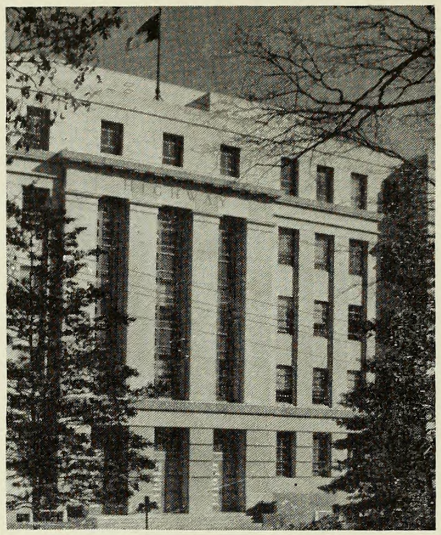
JANUARY - FEBRUARY, 1960

ROADWAYS MAGAZINE

A Publication For
N. C. Highway Employees

Volume X
Number 1

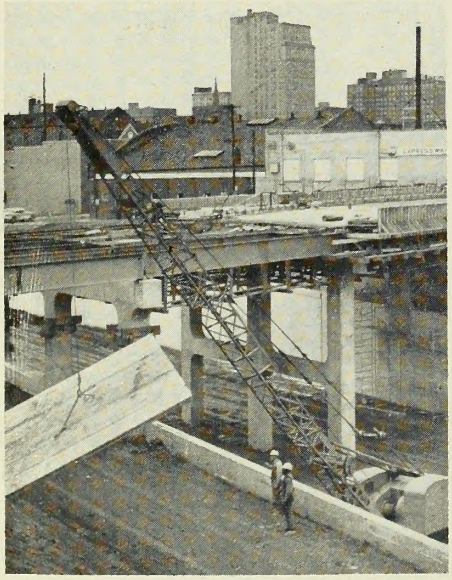
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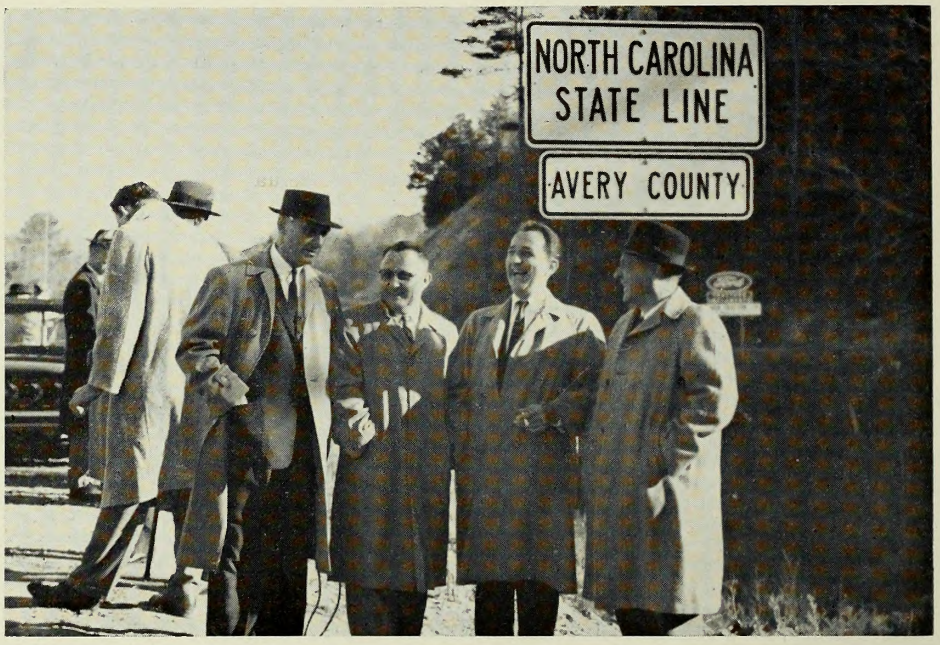
Luther H. Hodges.....Governor
J. Melville Broughton, Jr.....Chairman
Robert Bunnelle . . . James W. Mason
Fletcher H. Gregory, Jr. . . . R. T. Morris
Ralph L. Howland . . . . . J. Lee White
W. F. Babcock.....Director of Highways

January-February
Sam Beard.....Editor
Jeanne Hawthorne.....Assoc. Editor

The Cover



Grading and structure work is expected to be completed soon on this portion of the East-West Expressway through Winston-Salem. This shot, by Jim Keith of the WINSTON-SALEM JOURNAL, shows the Church Street bridge, with the eastern end of the present expressway at the left. This portion of Interstate 40 is scheduled for paving in the spring and will be under traffic later in 1960. For complete story on Interstate projects scheduled for opening this year, see page 8.



These are some of the North Carolina officials as they waited for the Tennessee delegation before the ribbon-cutting, officially opening the 603-159 route between Johnson City and Boone. Left to right W. Ralph Winkler, former highway commissioner under whose supervision much of the North Carolina building was done; Highway Director W. F. Babcock; Paul Johnston, representing the Governor's office; and Commissioner Ralph Howland of Elkin.

Photo courtesy Flowers Photo Shop, Boone.

Research Projects Scheduled For Completion By Mid-Year

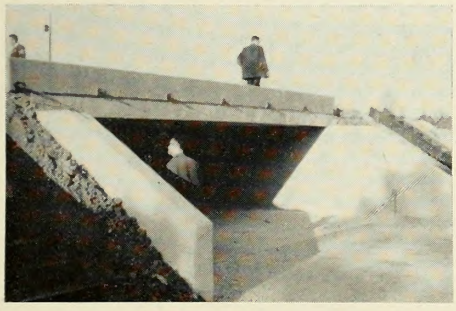
Year by year, budgeted funds for basic and applied research are increasing throughout the nation for private and public organizations and the reasoning behind the move is both sound and simple. Millions of dollars can often be saved through the expenditure of a very few thousand of dollars on concentrated research studies.

Nowhere is research and technical knowledge more important than in the field of highway construction and maintenance. It was with this in mind that the State Highway Commission launched a program of cooperative road research in 1957 with the engineering department of North Carolina State College and the U. S. Bureau of Public Roads.

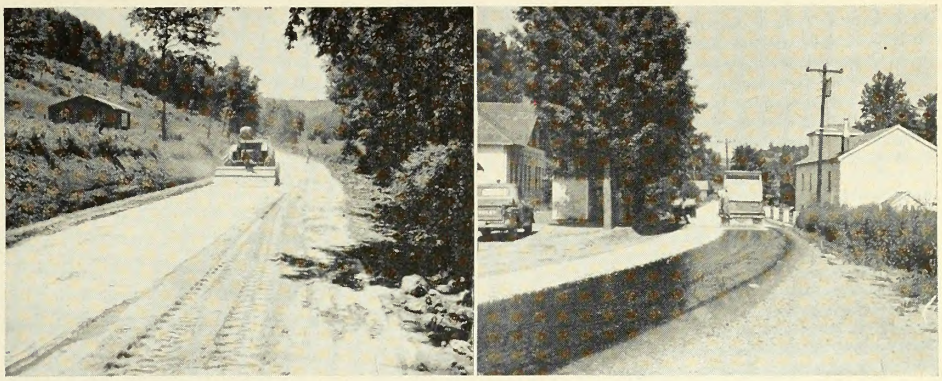
Nine individual projects were selected in the program which is costing approximately $100,000 annually with the Federal government picking up 70% of the tab. The Federal government allows expenditure of 1½% of all Federal Aid Funds for planning and research.

Four of the nine projects were launched in the summer of 1958 and are scheduled for completion by mid 1960. These four include (1) studies of soil stabilization methods to minimize road damage from frost action, (2) the effect of intensive roadside developments on traffic operations, (3) the effect of industrial growth on traffic generation in rural areas and, (4) the measurement of soil moisture and density in highway construction using nuclear radiation.

Director of the highway research program is Professor C. R. McCullough of N. C. State College's Department of Civil Engineering who took his B. S. and M. S. degrees in CE at Purdue. McCullough has had extensive experience as a consultant in soil matters over a wide area stretching from Alaska to the Panama Canal Zone.



Side view of a specially constructed short span bridge, utilizing precast, prestressed channel decking. Following completion of installation of test gauges, loads will be applied. The object of the research project is to determine the distribution of the load in a lateral direction.



Construction of a soil cement test section in Ashe County, left, showing the use of the tail gate of the Semon mixer to spread cement prior to the actual mixing operation. Each test section to be paved received a double-mat split seal surface treatment. A cationic emulsion was used throughout. The placing of the first course of mat stone on a test section in Avery County is shown in the picture at the right.

Working under him are various project engineers and graduate engineering students from State who have toured North Carolina from Murphy to Manteo gathering factual information for the final reports.

In the study of frost damage as related to various base courses, four project roads were picked in the mountaineous areas of the northwest where winter's frost damage is most critical. Test sections were paved in Ashe, Avery, Watauga and Yancey Counties in Divisions 11 and 13. Various additives were placed in the base courses of the half-mile long sections. Among the additives were calcium chloride, sodium chloride, portland cement and a mixture of lime and fly ash.

Roads picked have less than a 100 daily traffic count and the sections will be judged on the basis of their actual performance under traffic after they were surfaced with bituminous surface treatment in August of 1959.

From the research in soil stabilization methods savings of hundreds of thousands of dollars could be effected. Following winter heaving and breakup in 1958, the Highway Commission allocated almost a million extra dollars to Divisions 11, 13 and 14 to restore weather-damaged highways.

Where do the rural people of North Carolina work—how much do they drive and what roads do they use? Answers to these and many other questions form the data for a statistical approach to the matter of traffic generation in rural areas. During the past year research engineers have driven over 40,000 miles to interview some 8,000 families in the 100 Counties.

Important changes are taking place in the living and working habits of North Carolina's rural population and these changes are having a marked effect on Secondary Roads. The State is gradually shifting away from a predominantly agricultural economy to a more industrialized community. Many of the farm families who once devoted their entire time to crop cultivation and visited cities and towns only on marketing days are now dividing their time between part-time farm work and employment in nearby cities and industries.

Drivers who once used roads only once or twice a week now travel them daily, and while the industrial movement in North Carolina holds out great promise for a better balanced and more progressive future development, it will put additional strain on Secondary Roads. This was pointed up graphically last month as the State Highway Commission approved several major Secondary Road improvements for facilities which are now carrying traffic counts as high as 2,000-3,000 vehicles daily or more than some of our Primary System Roads.

On visits to rural homes, interviewing researchers have asked how many vehicles are there regularly, how many trips were made on the day before the interview, the origin and destination of each trip, the purpose of the trip and the place of employment for each working member of the family.

The records of industrial facilities were also examined — the names and addresses of rural employees were obtained and the routes they use to and from work were tabulated.

From such information, it is hoped that an accurate picture of the existing traffic patterns can be secured to help keep the Highway Department abreast of changing needs throughout the rural areas of the State.

Project "B" of the research program relates to commercial roadside development and the effect it has on traffic movement and general traffic operations.

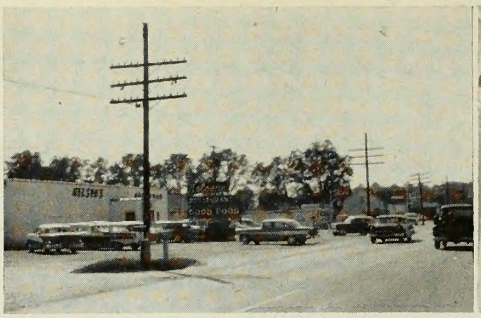
In North Carolina, there are many miles of highways with two lanes of pavement, limited right-of-way, relatively high traffic volumes and rather intensive roadside development. Turning movements into and away from the highways are practically unrestricted with private driveways and commercial entrances placed fairly close together.

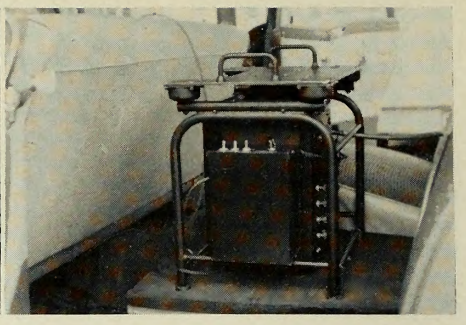
Frequently a new completely controlled access highway is the only method of freeing traffic movement, restoring capacity and making the highway safer. In other instances, however, the controlled access road may not be justified. Object of the research project is to develop a relationship between commercial roadside use and traffic operations and, in turn, develop a general criteria for better design of these roadways.

To measure the interruption to free movement or the "impedance" by roadside development, research engineers established nine test sites.

A speed and Delay Recorder, (see picture) was used to measure average vehicle speeds through congested areas and to show the time delay to motorists when passing through such built-up areas. Study has shown that the number of turning movements to and from roadside business is directly related to traffic volume and even to a greater extent related to the dollar income of specific types of businesses.

Determining the proper balance between the number of accesses and the desirable capacity on a road—developing a reasonable compatibility between these factors will help the highway engineer immeasurably in his work of trying to keep a highway efficient and safe while at the same time permitting a degree of access to the roadway from some types of abutting land uses.





The effect on traffic movements of intensive commercial roadside development is the subject of Reasearch Project B. This view typifies many such sites investigated throughout the State. This instrument, right, mounted in the rear of a standard automobile, measures all changes in speed. The cause of a speed change as well as the location of the speed change within the test section is recorded on the machine.

Project "D" relates to the measurement of soil moisture and density through the utilization of nuclear radiation. As the size of earth embankments and the speed with which they are constructed have increased, the necessity for more rapid and complete knowledge of "as constructed" condition of the soil has become more pressing.

There are presently under development, methods of possibly eliminating some of the problems resulting from the time delay in sampling and testing. The new methods for the determination of soil moisture and density employ radioactive materials with meters which show the percentage of moisture in a given soil sample. Equipment being used in current experiments includes: a probe type meter for insertion into a soil mass to any depth, a surface moisture meter for measuring moisture in layers of less than ten inches in thickness, a two-probe type density meter for insertion into a soil mass to any depth and a surface type meter for measurement of soil layers less than six inches thick.

Each of the moisture meters works on the principle of bombarding soil samples with atomic particles of no electrical charge called neutrons.

Other experiments on which reports will be issued this year include research into the wheel load distribution and structural behavior of pre-stressed concrete bridges for Secondary Roads, the utilization of plant growth control substances in right-of-way maintenance, the effect of mixing temperature on hardening of ashpaltic binder in hot bituminous concrete and the simulation on a digital computer of rural highway configurations and the movement of traffic.

As an approach to the problem of predicting the behavior of traffic on rural highways, the research involves the development of a program for a digital computer to use in calculating the results obtained from various types of highway design. The various highway characteristics which are being included are (1) the number of lanes, (2) vertical and horizontal alignment, (3) sight distances, (4) external restrictions on speed and passing, (5) intersections.

With such a computer program established it will be relatively simple to determine the result on traffic operations of various types of highway design features.

Alligator River Bridge Named For Warren

The Alligator River Bridge, connecting Dare and Tyrrell Counties, will be named for Senator Lindsay Warren of Washington, N. C.

At its recent meeting in Raleigh, the Highway Commission concurred in resolutions passed by the Dare and Tyrrell county boards of commissioners asking that the bridge, which is scheduled for Feb. 2 contract letting, be named for the veteran attorney and political leader. The Southern Albemarle Association also had gone on record in favor of naming the bridge after Warren.

The Commission does not name bridges, such authority being vested by statute in local authorities such as county commissioners and city officials. It does, however, erect name markers for bridges after a county or counties connected by a bridge has named it for a person.



From The Director's Office

Dear Fellow Employees:

Now that the old year has gone and 1960 is upon us, I wanted to take this opportunity of addressing a New Year's Greeting to you. I sincerely hope that these twelve months will bring both health and happiness to you and yours.

In a great many ways 1959 was a good year. Contract construction, which represents better highway service to our people was close to an all-time high. State Force construction stabilized or paved a good many hundred miles and, from the standpoint of maintenance, I think I can say that our roads are generally in better condition that last year. Roadsides are cleaner also because of somewhat better housekeeping habits of our people and regular clean-up campaigns.

The old year had its problems too. Federal Funds for new construction were in shorter supply and, though we did not have to stop contract lettings, there was a slowdown. There was always the problem of greater highway need than there was money and the people who asked for special favors that neither you nor I could give them. These problems will be with us again in 1960.

So long as we can continue to provide our people with progressively better highway service—so long as we handle problems promptly and with courtesy and understanding, we can continue to bring credit to our own jobs and to the organization for which we work. My own single resolve in this New Year is to spend whatever time and effort is needed to work as closely as possible with you in solving problems within the organization and without. I am sure that you will join me in that resolve in whatever capacity you work. No more can we ask of ourselves or of others.

Happy New Year.

Sincerely,

W. F. Babcock

W. F. BABCOCK

N. C. S. H. P. E. A. Association News

VOLUME 9—EDITION 1 JANUARY-FEBRUARY

NEW INSURANCE REVISIONS voted by the employee certificate holders by a majority of over 75 per cent and effective November 1 are as follows:

Group Hospital and Surgical: $9 daily room allowance; $135 for hospital "extras"; $200 maximum surgical allowance; $90 maternity benefits—both employee and dependents.

Accidental Death and Dismemberment: extended to cover both on the job and off the job accidental death or dismemberment.

In-Hospital Medical Benefits: $3 per day for maximum of 31 days or $93 for doctor's visits in the hospital only. This will not be allowable for visits by a surgeon, since such visits are included in his regular fee, but is to cover visits by a medical doctor. This allowance is to employees and dependents.

Insurance Groups: Class O, less than $1,000 annual salary; Class 1, $1,000 but less than $1,500; Class 2, $1,500 but less than $1,900; Class 3, $1,900 but less than $2,400; Class 4, $2,400 but less than $3,000; Class 5, $3,000 but less than $3,500; Class 6, $3,500 but less than $4,000; Class 7, $4,000 but less than $4,500; Class 8, $4,500 but less than $5,000; Class 9, $5,000 but less than $6,000; Class 10, $6,000 annual salary and over.

COSTS

Class	Life Ins.	Emp. Only	Emp.-Family
0	$1,500	$2.21	$5.24
1	2,000	2.60	5.63
2	2.500	3.24	6.27
3	2,500	3.42	6.43
4	3,000	4.04	7.07
5	3,500	4.51	7.54
6	4,000	4.80	7.83
7	4,500	5.09	8.12
8	5,000	5.39	8.41
9	6,000	5.98	9.00
10	7,000	6.57	9.59
Hospital only —		1.09	4.12

Breakdown of premium costs: Life, $1.10 per $1000 insurance; AD&D, .166 per $1000; Accident and Sickness, .739 per $10 of weekly indemnity; hospital, surgical and in-hospital medical, $2.367 per month for employee only, $6.551 per employee per month for family members. These rates are on a monthly premium basis.

Additional Provisions of Policy: Effective with the new policy year beginning October 1, 1959, employees retiring will be permitted to apply for continuation of hospital-surgical benefits under special plans offered by the company. These plans are not the same as benefits paid under the Group Insurance Plan for employees, but are special plans and the premiums are much higher than paid while an employee. However, it is something that has not been permitted in the past and any employee retiring may apply through Mr. Witherspoon's office for information as to how to obtain the special hospital-surgical insurance after retirement. This must be done within 30 days.

Insurance contract was renewed with Connecticut General Life Insurance Company, this being our 31st year with the same company. We have a very good insurance program and the premium rates are very good with a guaranteed return to us of 92.5 per cent annually in either claims, reserves or premium waivers when reserves are sufficient. An explanation of the necessity of the recent small increase in premiums was made in the last issue of ROADWAYS.

I trust each of you had a VERY MERRY CHRISTMAS and that the NEW YEAR will be abundantly good to you and your families.

Otis Banks, Secretary

THE SECRETARY SAYS

Smiling faces are never homely—if you want to add to your face value, SMILE.

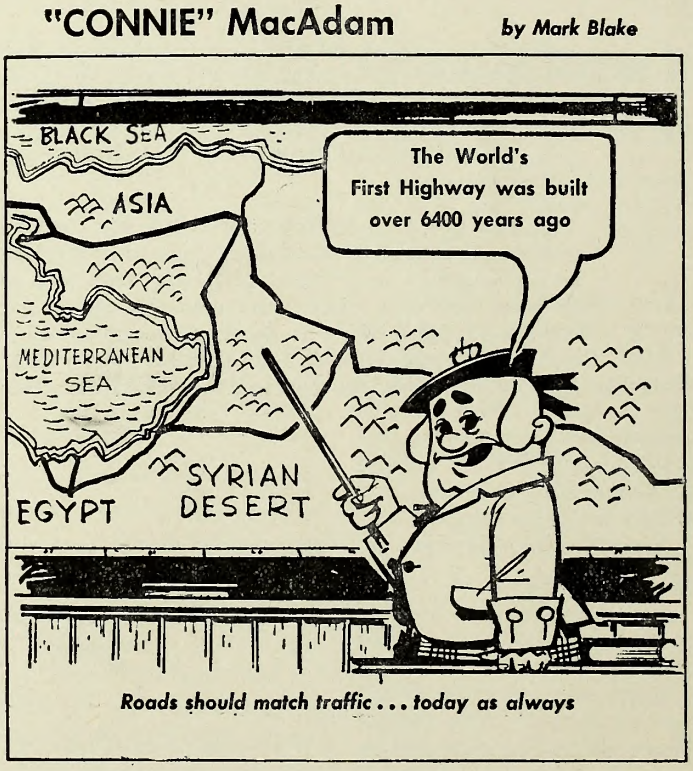
We never know what some people will do next—neither do they.

To avoid that run-down feeling — "Cross Crossings Cautiously".

We should always remember that the tongue is in a wet place and is likely to slip.

It's almost impossible nowadays to tell whether a girl is dressed to catch a man or a cold.

—O. M. B.



PERSONNEL PERSPECTIVES and POINTERS

For many years the Highway Commission realized that there was a critical need for some type of In-Service Training Program to prepare our technicial level employee to perform his duties better, and to qualify him to take advantage of advancement possibilities. This need was most critical in the sub-engineering classifications.

With this in mind, the first In-Service Surveying Course was established in 1957. The response was good to this course and some 225 employees throughout the State enrolled for and completed this course. The curriculum for this course was developed in conjunction with the Civil Engineering Department, North Carolina State College on the level with the courses offered during the Freshman and Sophomore Engineering School years. The instructors for the first course were brought into State College for a period of 2 weeks and were briefed on the course material and methods of teaching it. This also was carried out in conjunction with the faculty of the School of Civil Engineering. As a result of this first course, much enthusiasm was developed throughout the state for a continuation of such a program.

Upon the completion of this course, each instructor was asked for his comments and ideas on how the course could be improved. As a result many ideas were obtained for improving the course. One of the most important to come out of this first school, and one held by the majority of the instructors, was a suggestion that the course offered in the first course be expanded into two courses of equal length, thus enabling the student to go much further into this material than had been possible during the first course. Another idea that came out of this first program was the suggestion that the trainees be given some type of screening in order that those students who are able to take the accelerated pace at which the course proceeds could do so without being held back by those who were not able to keep up, due to their educational background.

With this in mind a representative of the Highway Personnel Office and the State Personnel Testing Service traveled over the state and tested all interested employees. This was done in preparation for the second course in our In-Service Training Series. On the basis of these test results, an attempt was made to determine the level at which the trainees could absorb the material. Some 175 trainees were selected to take either Course I or Course II which were developed from the one previous course. It was thought that those making a sufficiently high test score would be qualified to take the advanced course. Those not selected could start with Course I and then upon successful completion of this course follow it with Course II at a later date.

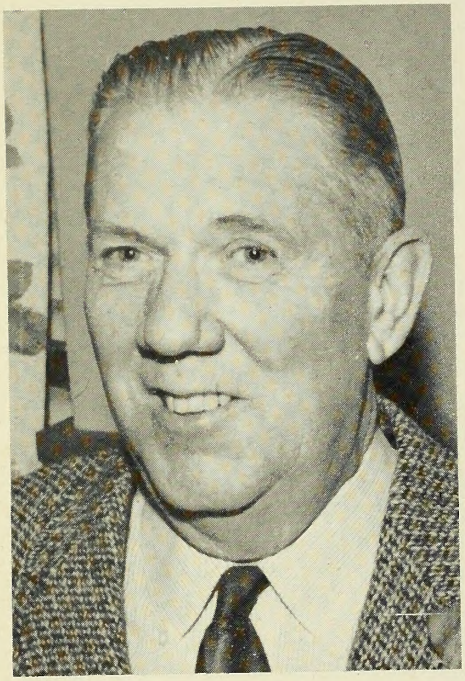
On the basis of the information gained throughout the first course, three of the instructors who had taught the course, and who were vitally interested in this program, were asked to come into Raleigh and work on a revision of this course material in order to better fit the needs of the Highway Commission. C. W. Bass, Don Overman, and James Lee worked very diligently on this material and completely revised this material into Courses I and II. In preparation for getting the second In-Service Training Course underway, the instructors from the fourteen previously selected by the State Construction Engineer were asked to come into Raleigh for a briefing on the revised course material and methods of teaching the course. This was conducted by Don Overman and James Lee who had worked with this revision and had instructed in the previous course.

(See Personnel—page 21)



Some of the men who will be instructing classes are, left to right, front row: J. W. Wheeler, C. L. Haislip, R. E. Hubbard, C. E. Collier, William Dudley, James W. Lee and J. Y. Joyner. Back row: R. G. Southall, G. R. Parrott, J. B. Hornbuckle, W. H. Manley, Jr., C. K. Smith and J. M. Worley. Don Overman, extreme left, conducted the briefing session in Raleigh for these men.

Welcome



John P. Swain

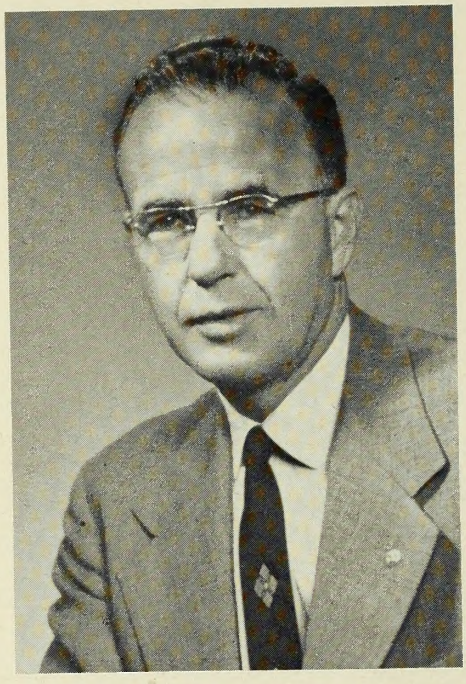
John P. Swain of Raleigh moved into the post of Secondary Roads Officer in January, succeeding Harold Makepeace, who left the Department to become private secretary to Governor Hodges.

Swain, who is a native of LaGrange, has served as a member of the Wake County Board of Commissioners for 24 years, 16 of which were as chairman. He is a past president of the North Carolina Association of County Commissioners.

Director of Highways W. F. Babcock said "We deeply regret to lose the services of Harold Makepeace, a fine and capable man who has rendered great service to the State with this Department and its expanding Secondary road program since July 1957. However, we are very pleased to find a person of Mr. Swain's ability to fill the position, and we are confident that his extensive public service will enable him to make a great contribution to the Secondary Roads Department. His long service in county government, where secondary road matters are very important, gives Mr. Swain an excellent background for the work he will be doing."

(Continued on page 20)

Best Wishes



Harold T. Makepeace

The Secondary Roads Department's smiling boss has moved to the Capitol as right hand man to Governor Hodges.

Former Sanford mayor Harold T. Makepeace, who directed the Secondary Roads Department during its infancy, became private secretary to Governor Hodges, succeeding Ed Rankin. Under his supervision, Statewide standards were set up for the system, and plans for secondary roads in each of the State's 100 counties were inaugurated.

The new private secretary to the Governor has a long record of public service. He served as mayor of Sanford in 1955-56, carrying on a family tradition which saw his grandfather, father, and uncle serve the town as mayor. Makepeace was a member of the Sanford City School Board for six years.

He is director of the Central Bank and Trust Company, the Sanford Savings and Loan Association and the Black Panther, Inc.

Makepeace's business interests include lumber, millwork and real estate. He is a past president of the Sanford Rotary Club and past district govenor of Rotary International and holds the Silver Bea-

(Continued on page 20)

Trip Time Is Cut On Section US 70

Two additional lanes on US 70 between Greensboro and a point near Whitsett were opened to traffic recently and a simple calculation showed that a total of some 2,100 motorists who travel the entire distance over the route from Greensboro eastward to Durham saved a grand total of approximately two weeks travel time during the first week the road was in service. This does not include the savings to some 4,000 other motorists who use portions of the improvement daily.

The 11.30 mile section of dual laning will be extended eastward during 1960 to the west end of the Durham Bypass. Paving contracts have already been let on the various other sections and, when completed to Interstate standards, the US 70 markings will give way to I-85. Interstate 85 runs from Petersburg, Virginia southward to the vicinity of Henderson, then bypassing Durham on the north side, Greensboro on the south side, then southwestward toward High Point, Lexington, Salisbury, Charlotte, Gastonia and Kings Mountain.

The eleven mile section opened in November consists of eight inches of plant mix asphalt over a fifteen inch base. The roadway provides two twelve foot lanes for each travel direction separated by a thirty-six foot median strip.

When the entire Greensboro-Durham section is completed it is estimated that total trip time between the two points will be slashed by fifteen minutes. Design speed for the Interstate is 60 MPH while the operating speed of the two lane sections was between 40 and 45 MPH.

Study Predicts Population of 6 Million By 1960

Tremendous State-wide interest was shown recently with release of a population study of North Carolina prepared by the Department's Advance Planning section.

Researched and written by Carolyn C. Wagner of the Advance Planning Department, the 139 page study shows population projections from 1900 to 1980. The breakdowns show anticipated population growths or decreases by areas, counties and municipal leading areas. Also shown are estimated military and related population for selected counties, as well as resident college enrollment for several counties.

Total population for North Carolina in 1950 was 4,061,900. By 1980, this figure will be 6,190,000 or an increase of 52.4 per cent. The total percentage increase is further broken down into a 36.8 per cent rise for eastern North Carolina, a 69.4 per cent increase for the Piedmont and a 26.2 increase for the mountain region.

During the period that North Carolina's population is growing by 52.4 per cent, the South Atlantic States will be increasing by 77.1 per cent as opposed to a 71.9 per cent population growth for the entire continental U. S. between 1950 and 1980.

Greatest county population growth is forecast for populous Mecklenburg which is expected to show a 156.3 per cent increase between 1950 and 1980. Mecklenburg's population twenty years from now is forecast for just over half a million.

Other counties which will show a marked increase are: Guilford, 134%; Durham, 102%; Wake 97.7%; Gaston, 96.2%; Alamance, 93.2%; Forsyth, 82.7%; and Catawba, 82.4%.

The Charlotte trading area of 13 counties which had a 1950 population of 804,400 will have a 1980 population of 1,404,000, according to the forecast. During the same period, the five county trading area of Greensboro will increase from 411,000 to 780,700; the seven counties around Durham will grow from a 1950 population of 273,200 to a 1980 total of 427,600; Winston-Salem's seven county trading area will increase from a 1950 total of 358,300 to a 1980 tally of 547,300; the ten county area which trades in Asheville will show a population increase from the 1950 figure of 308,900 to a 1980 estimate of 424,000.

In the eastern region of the State, the six county trading area of Wilmington which had a 1950 population of 223,300 should have a 1980 population of 316,900; the seven county trading area of Wilson-Rocky Mount had a 1950 total of 342,600, while the 1980 estimate is for 435,000; Raleigh's five county trading area will increase from an actual 1950 count of 304,800 to an expected 1980 count of 471,500.

The study, revealed to the Highway Commission at its December 11 meeting in Raleigh drew high praise from Commissioners. The report will be combined with other Advance Planning information in working out plans for Trunk Line and other highway improvements. Already, several other State agencies and private concerns, as well as the press have expressed interest in receiving copies and a second edition of the publication is planned.

Explaining the purposes of the booklet in the foreword, the authors explain that "decisions as to the location and design of highways and streets now in the planning stage, must be based on forecasts of growth and shifts in population for a period of many years. Despite the fact that population forecasting is a hazardous undertaking, the making of population forecasts has come to be regarded in recent decades as an essential part of sound planning.

"A growing popuation means that ever-increasing demands will be placed upon public facilities and services in the future.

"Efficiency and economy dictate that the facilities now being planned and built should serve future traffic demands adequately, or with planned additions, to at least the year 1980."

Pay Checks Mailed Early During Holidays

Pay checks were mailed early during the holidays, so that employees would be assured of receiving their bi-weekly checks before the New Year's holiday.

Checks are normally mailed on Wednesday, for Friday delivery, but in this case, checks were put in the mail on Tuesday, to insure delivery before the New Year's holiday. It was necessary for Finance Department employees to pick up four working days days during the Christmas period and a good deal of night and holiday work was involved.

The inaugural checks of the new bi-weekly plan were handed out on November 18 to all but Equipment Department personnel, who had received their first bi-weekly checks earlier. A payroll adjustment check was delivered to each employee along with the first bi-weekly check, averting any hardship to employees during the switch from a monthly to bi-weekly pay plan. The amount of this adjustment check is being deducted in equal installments over the 16 bi-weekly pay periods between the inauguration of the plan and June 30, 1960.

Controller Ervin Dixon and Gene Baskett completed a tour of all 14 divisions, explaining procedures in filling out vouchers to employees involved in this process. Both Dixon and Baskett expressed appreciation to employees for good attendance and fine cooperation.

Employees are reminded that the North Carolina State Income Tax Withholding Law becomes effective in January and this deduction will be handled for them, in compliance with the law, beginning with pay period 070 and with checks scheduled for delivery on January 15, 1960.

Said St. Peter to a new arrival: "And here is your golden harp." The newcomer, a modern American, asked, "How much is the first payment?"

157 Miles Of Interstate Highways Will Be Opened To Traffic In 1960

Tar Heel motorists will travel over 157 miles of brand new Interstate highways this year, despite recent reports of shortages in federal highway funds.

Already scheduled to be let to contract during 1960 are 48 major road projects, including 11 Interstate projects and 37 on the Primary system.

Five sections of the Interstate now open to traffic are: the Salisbury and Charlotte bypasses (I-85), a section from Greensboro to Kernersville (I-40), a portion of the East-West Expressway in Winston-Salem (I-40), and a ten mile link between Benson and Dunn (I-95). An eleven mile section between Greensboro and a point near Whitsett in Guilford County was opened to traffic recently for the winter months. This section will be closed again in the spring for shoulder work and final touches before it is incorporated into the system as I-85. It is now a part of US 70.

Five routes on the four lane, controlled access Interstate will eventually serve North Carolina with the completion date of 1975 set for the entire system. Interstate 95 is the eastern route. When completed the expressway will run from Maine to Miami, entering North Carolina at the Virginia line half way between Roanoke Rapids and Weldon. Moving south the road will skirt Rocky Mount, Wilson, Benson, Dunn, Fayetteville and Lumberton.

In addition to the Benson-Dunn link of I-95 now open, two other sections measuring more than 41 miles will be under traffic this year. The route will offer local and through motorists more than 50 miles of four laned service from a point near Kenly southward to Eastover in Cumberland County. In addition to these sections, the Lumberton bypass will become a part of I-95 when minor revisions bring it to Interstate standards.

Second of the routes bisecting the State is I-85, which connects Petersburg, Virginia, with Montgomery, Alabama. I-85 will serve as both an east-west and north-south artery and the several sections already open or slated for 1960 traffic will run through the heart of the rapidly developing Piedmont Crescent.

An 18-mile link of I-85 in Vance and Warren Counties is now being paved along with a lengthy section between west Durham and Greensboro of some 46 miles. These sections are also scheduled for 1960 openings.

Portions of presently-numbered US 29-70 between Greensboro and Salisbury will be incorporated into the I-85 route when additional grade separations and access control are secured. However, this section is now offering very little resistance to free flowing traffic movement since it is a four lane divided road with partial control of access.

A four and one-half mile southern extension of the already opened Charlotte bypass will be readied for 1960 traffic extending the route from Mecklenburg Couny into Gaston County in the direction of Gastonia. An additional lane is also under contract in the Kings Mountain area leading into South Carolina on I-85.

Third of the Interstate routes in North Carolina is I-40 which begins in Greensboro and courses through America's mid-section to California. The Greensboro-Kernersville link has been open for some time along with a 3.2 mile portion of the route in the heart of Winston-Salem. Now under paving contract is another 3 mile extension of the Twin City project as well as a ten mile section in Forsyth and Davie Counties. A short section between Kernersville and Winston-Salem is scheduled for 1960 letting to tie Greensboro and Winston-Salem together with Interstate Service.

Two of the largest I-40 projects slated for 1960 traffic lie in Burke County slightly south of the existing US 64 and amounting to some 16 miles. These projects, four lanes of concrete pavement, run from Morganton to Hildebran and from a point near the Burke-McDowell County line to NC 18 at Morganton. Placing the new roads under traffic will greatly ease the burden on US 64 and reduce trip time between the Piedmont and points west. Grading contracts are now underway across McDowell County to tie the entire route in with the existing four lane pavement between Old Fort and Ridgecrest.

Heaviest of the grading projects in the State is almost completed in the western county of Haywood and portions of I-40 bypassing the heavily congested city of Canton are being readied for contract letting in 1960 and 1961.

The fourth route to serve Tar Heels is Interstate 26 which runs southward from Asheville to Hendersonville and through Polk County to the South Carolina line. Northern terminus is Asheville and the road will end at Charleston, South Carolina. Aerial survey work is completed and advance planning engineers are working to tie the route down to a specific location. The first section to be let to contract will be the Hendersonville-Asheville link to relieve traffic on congested portions of US 25 between the two cities.

Latest of the Interstate routes added to the North Carolina system is I-77 which will connect the Piedmont with industrial centers of Ohio and the Midwest. North Carolina was the first to tie down new sections of the route from Charlotte northward to the vicinity of Eilkin. Extension of the route to the Virginia line awaits agreement between Virginia, West Virginia and North Carolina on a common meeting point at the State lines.

When the I-77 route was approved North Carolina was underway with a US 21 bypass of Statesville and the Highway Commission approved inclusion of the project in I-77. The Statesville bypass is set for paving in 1961 along with grading and structures for the Elkin bypass and a 13-mile stretch from the Statesville bypass southward to Mooresville in Iredell County.

On November 1, 1959, North Carolina had upwards of $60,000,000 of Interstate under contract exclusive of right of way and engineering costs which boosts the total to well over $70,000,000. Some $28,000,000 of the total was for paving jobs.

Though the announced shortage of federal funds caused highway officials to pull in their sights slightly, delaying project lettings by as much as three to six months, money is available for the paving of a goodly number of previously paved projects thus making the roads available to return dividends on public investment.

Since the Interstaae program began in 1956, North Carolina has expended some $160,000,000 on the system, financed with 90% federal funds and 10% state monies. Total cost of the program in North Carolina over the next 15 years

is estimated at upwards of a half billion dollars.

These are the Interstate projects scheduled for letting during 1960:

Interstate 40—from Burke County line to US 221 (paving 13.3 miles in McDowell County)

Interstate 40—adding second lane to the Statesville By-pass (paving for 4.1 miles in Iredell County)

Interstate 40—Canton By-pass, west section (grading and structures for 5.4 miles in Haywood County)

Interstate 40—from Kernersville to Winston-Salem (grading and structures for 7.5 miles in Forsyth County)

Interstate 40—from US 221 to Old Fort (paving 13.3 miles in McDowell County)

Interstate 85—Gastonia By-pass (grading and structures for 10.9 miles in Gaston County)

Interstate 85—from Kings Mountain to the South Carolina line (paving 9.1 miles in Cleveland County)

Interstate 85—Durham By-pass (paving for 5.4 miles in Durham)

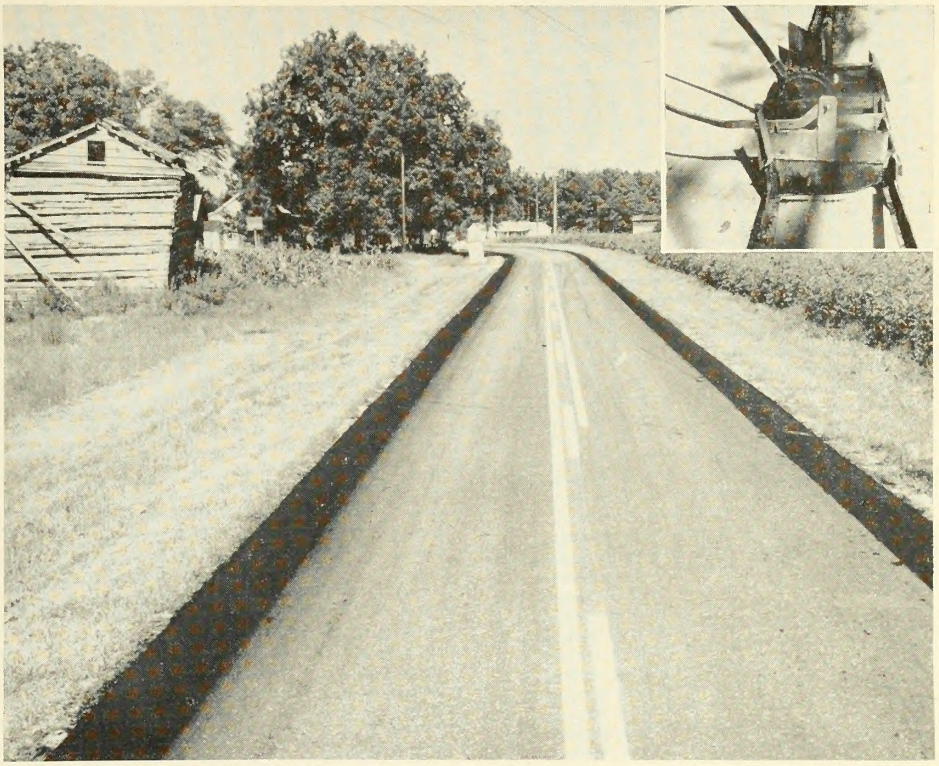
Interstate 95—from Virginia, southward to US 158 (grading and structures for 8 miles in Halifax and Northampton Counties)

Interstate 95—from Lumberton to St. Pauls (paving 9.88 miles in Robeson County)

Interstate 95—from St. Pauls to Fayetteville (paving 10.18 miles in Robeson and Cumberland Counties)

Fore more than a year a man had eaten in a small restaurant whose sign read "Mary's Home Cooking", but never once had he seen Mary. Finally his curiosity got the better of him and he said to the waitress, "I've been having lunch here for a long time and Mary is never around. Where is she?"

"She's just where the sign says she is, mister," the waitress answered, "home cooking."



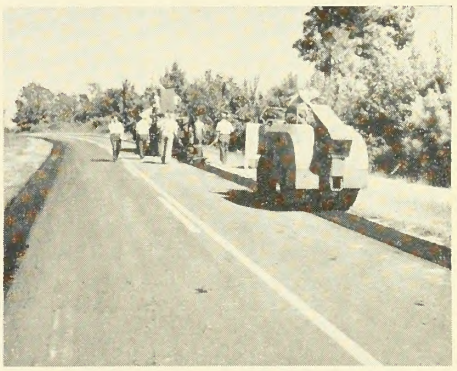
Here is the finished product, with 22-inch ribbon type edge reinforcement on both sides of the pavement. Inset shows a close-up of the strike-off spreader showing "eat hole" at outside end of rear strike off for placing extra material where needed at the pavement edge; lever for raising rear strike-off blade; and lever with sextant for steering.

Home-Made Strike-Off Spreader Is Used For Ribbon Type Edge Reinforcement

Ribbon type edge reinforcement is being used as a "preventive medicine" on many of our roads. The photographs accompanying this article show how roads are strengthened with a ribbon type reinforcement cover of sand asphalt.

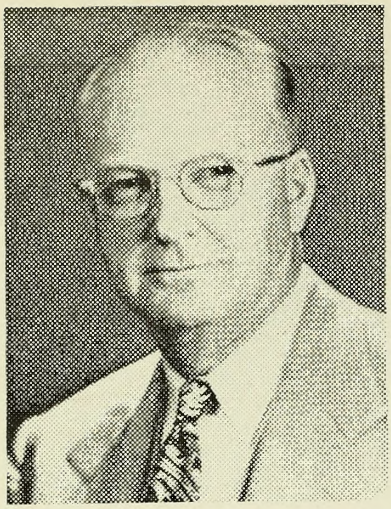
This job was performed on a road in Sampson County. The patch mixer and strike-off spreader were pulled in tandem by a two-ton dump truck. Similar jobs have been done in other counties with materials ranging from a sand seal to bituminous mix prepared in a "hot mix" asphalt plant. The pre-mixed material is recommended for this type of work when it is available. The pre-mixed material from the larger central mixing plant will increase production in linear feet of ribbon type reinforcement per day and will reduce the cost per square yard.

The "strike-off spreader" used in Sampson County was made from 8-inch drag blades. It is non-rental equipment but is shown in the cost date at a nominal cost of $1.00 per day.



This photograph shows mixing, placing and rolling "ribbon" type edge reinforcement on bituminous surface treatment.

There are similar "strike-off spreaders" in Divisions 3, 4 and 6, and additional information can be obtained through Maintenance Engineer B. W. Davis.



Lewis Whitfield Dies

The Commission was sadened by the death last month of Lewis E. Whitfield, until recently Sixth Division Engineer. Whitfield died in a Fayetteville hospital following a heart attack. He was on sick leave at the time of his death and would have retired at the end of his sick leave.

A native of Sampson County, he was a graduate of the University of North Carolina and taught in the public schools prior to his appointment in 1918 as county highway engineer for Sampson. He held this post until the State took over the roads system in 1931, and he was named District Engineer. Several years later Whitfield became Assistant Division Engineer of old Division 5 with headquarters in Fayetteville. He also served as Division Engineer for the Sixth Division with headquarters in Asheboro; head of the Third Division at Fayetteville; and when the Commission was expanded to 14 divisions, became Division Engineer of the Sixth Division, working out of the Fayetteville office.

Sympathy is extended to his survivors, including his widow, the former Susan Kerr; three sons and a daughter.

Barefield Killed

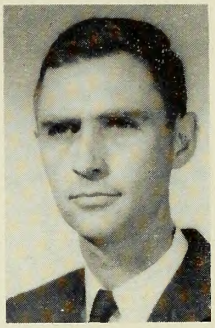
An automobile accident in early December claimed the life of inspector Julius S. Barefield, 39, of Sanford.

Barefield apparently fell asleep at the wheel and his car climbed an embankment on the US 1 bypass. Highway Department employees following the car saw the Barefield car headlights go straight up as the vehicle climbed a hill.

Barefield is survived by his wife, Mrs. Mary W. Barefield; his mother, six brothers and sisters.

Engineering Promotions

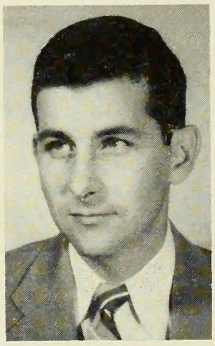
Quinton L. Sorrell, Jr., is the new Area Construction Engineer for Divisions Five, Seven and Nine, succeeding J. B. Cutchin of Durham, who is retiring after more than 35 years of service with the Highway Department.



Sorrell, who is a native of Durham, joined the Commission after his graduation from Duke University in 1950. Since 1957, he has served as District Engineer in District II, Division Five, with headquarters in Durham, where he will remain in his new post.

He is married to the former Arlene Hopson and they have two sons, Quinton Lee III, age 4, and Charles Vernon, who is two years old.

Carlton Lewis Edwards of Durham has been named District Engineer in the Fifth Division, replacing Quinton Sorrell, who is now Area Construction Engineer.



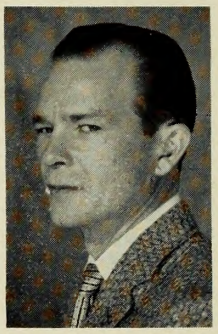
Edwards will be in charge of District II, which embraces Durham, Granville and Person Counties.

A native of Roanoke Rapids, Edwards joined the Highway Department in 1948 as a rodman. He is a civil engineering graduate of State College and a veteran of World War II.

The new District Engineer is married to the former Jane Young Strickland and they make their home at 1300 Broad Street in Durham.

Luther H. Beam has assumed the duties of Area Construction Engineer for Divisions Three, Six, and Eight, with headquarters in Fayetteville. He succeeds John H. Davis, recently named State Construction Engineer.

A Lincolnton native, Beam is a graduate of Mars Hill College and the University of Tennessee. He also studied at Lenoir Rhyne College and Appalachian State Teachers College. His highway work dates back to 1948, when he worked during the summer as a rodman.



Beam formerly served as a Resident Engineer in the Twelfth Division. He is married to the former Barbara Ann Jarrett and they have a two year-old daughter.

Gasoline Survey Underway Now

A survey to determine the number of miles Mr. Average Motorist gets from a gallon of gasoline is underway now by the Commission's Planning Department, in cooperation with the U. S. Bureau of Public Roads.

Perhaps you are one of the more than 1,000 Commission employees who will receive a letter concerning the survey. Names of employees were "pulled from a hat" and survey participation has no bearing whatever, on the employee's job.

In explaining the procedure, Planning Engineer James Burch emphasized that names of employees who take part in the survey will not be made public, nor will the findings of the survey be publicized.

The survey works this way: a record is kept on nine purchases of gasoline, as well as the number of miles driven on this gasoline at speeds of 35 miles per hour or less. Other information to be compiled includes the make and year model of car, number of cylinders, body type, transmission type and grade of gasoline used.

When completed, the questionnaire should be returned to Burch in the self-addressed, stamped envelope enclosed with the letter.

Roadside Parks Draw Praise From Tourists

ROADWAYS is pleased to publish excerpts of a recent letter from Mrs. Arnold A. Gorman of Islington, Ontario, Canada.

"From the Smokies in the west through the Piedmont to the coast and the coast itself, we found much of interest and to admire. Everyone was so courteous and kind to us, so that our trip was most enjoyable.

"We do want to commend you on the excellence of your wayside parks which are just about the best that we have encountered in our travels from our Canadian maritime provinces to Florida. I would say those in Maine and in New Brunswick are on par with yours, but the washrooms in your road parks were the cleanest, and the most immaculate. It is such a pleasure while motoring to be able to stop in a sylvan spot, and have a table and bench on which to eat lunch or enjoy a cup of coffee or tea. The pleasure is doubled when one has a clean washroom in which one can wash off the dust of the road and be refreshed."

Similar words of praise came recently in a letter from Thomas Van Winkle of West Hollywood, Florida, who wrote:

"We spent four days camping out—going through your state and would like to compliment you on your nice roadside parks. They were by far the best from Florida to Illinois and back to Florida through the southern states and your roads also are something to be proud of."

Pity the poor American Indian. The white man stole his land; the co-ed his war paint and the college boy his war cry.

115 Projects Costing $10,300,000 Approved By Commission in Dec.

Primary, Secondary, Urban Projects Are Included

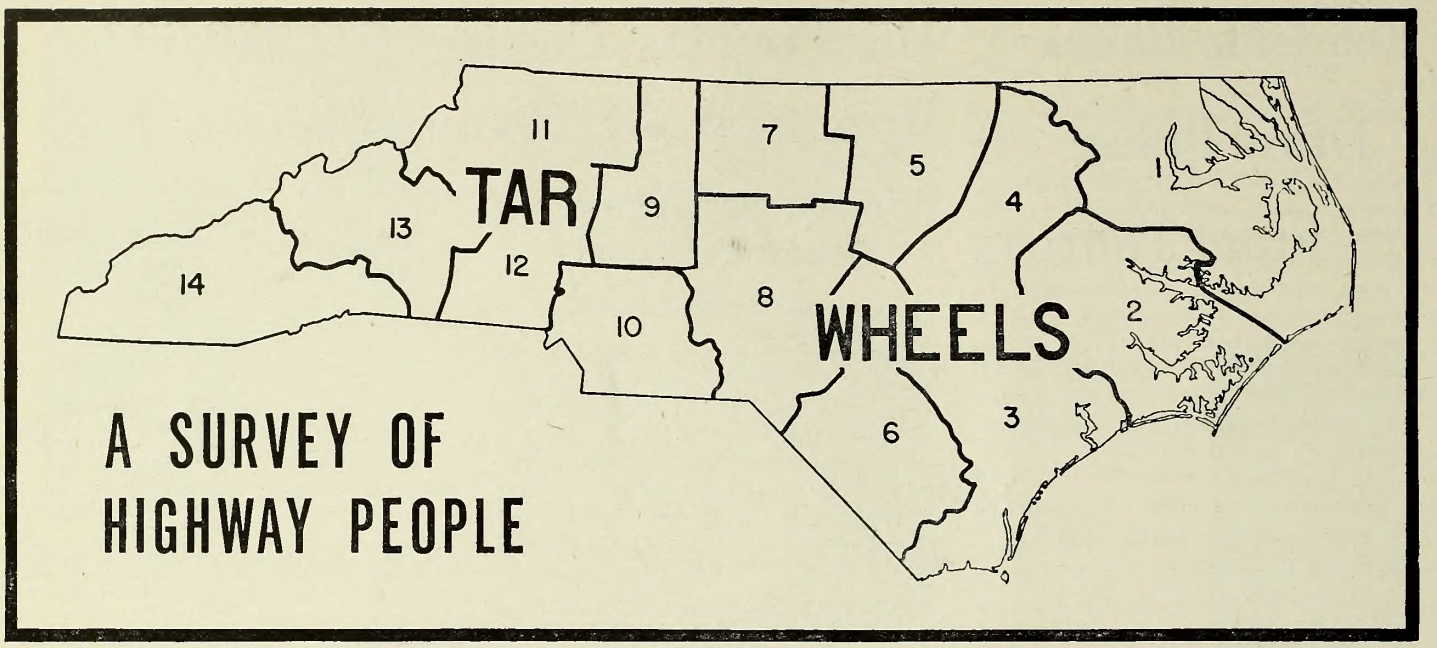
At its recent meeting in Raleigh, the Highway Commission approved for construction a total of 115 projects which will cost an estimated $10,300,000.

The list of projects includes 47 improvements to the Secondary System; 45 projects on the Primary System and 16 urban area projects. Also approved were 7 plant mix resurfacing projects.

MAJOR SECONDARY IMPROVEMENT PROJECTS—Cost, $6,000,000

County	Description
Pasquotank—	Widen Foreman Bundy Road to 20 ft. The road was paved 9 ft. wide in 1923 and now carries approx. 300 vehicles per day. Length of project, 5 miles.
Lenoir—	Widen road 1745 and construct to heavy duty standards. Road provides important connection north of Kinston between NC 11 and US 258. Daily traffic volume, 2,700, exclusive of trucks. Length, 1.6 miles.
Duplin—	Grade, drain and surface road 1961, which provides important connection between poultry raising section of the county around Beulaville and the new Poultry Processing Center at Rose Hill. Carries 70 vehicles per day. Length, 7.2 miles.
Craven—	Construct bridge at Streets Ferry, providing more direct all-weather connection from Vanceboro south. Traffic volume, 150 vehicles per day.
Wayne—	Construction of a new road to provide a connection south of Goldsboro from NC 111 crossing the Neuse River to a paved Secondary Road. Length, 2 miles.
Durham—	Replace bridge No. 50 located on an important radial route leading into Durham. Facility now carried 2,000 vehicles per day.
Columbus—	Widen roadway and bridges on road 1917 just south of Whiteville. Traffic volume, 5,300 vehicles per day. Length, 0.6 mile.
Alamance—	Widen road 2116 to provide important connection with NC 87 south of Burlington and Swepsonville. Facility is 16 ft. wide and carries 2,000 vehicles per day. Length, 1.6 mile.
Guilford—	Widen road 3318 to provide better connection between NC 22 at Pleasant Gardens and US 421 south of Greensboro. Facility is 16 ft. wide and carries 1,500 vehicles per day. Length. 3.2 miles.
Guilford—	Widen Church Street Extension which provides an important radial route north from Greensboro. Facility is 16 ft. wide and carries 1,600 vehicles per day. Length 3.5 miles.
Guilford—	Widen road 2724, which provides important connection in eastern part of county and extends north of Gibsonville toward Osceola. Present 16 ft. pavement carries 1,000 vehicles per day. Length, 5.2 miles.
Rockingham—	Widen road 2114, which serves as important connection between NC 87 at Wentworth and Leaksville. Present 16 ft. pavement carries 1,500 vehicles per day. Length, 4.2 miles.
Rockingham—	Replace bridge over Matrimony Creek at west edge of Leaksville city limits. Carries 1,200 vehicles per day.
Montgomery—	Grade, drain and stabilize road 1307, which provides connection between Abner and Ophir in north central section of the county. Length, 3.7 miles.
Randolph—	Replace bridge over Sandy Creek between Melancton and White's Chapel. Carries 200 vehicles per day.
Forsyth—	Widen road 1001 which provides important radial connection east of Winston-Salem to Lewisville. Present 18 ft. pavement carries 2,000 vehicles per day. Length, 6.24 miles.
Rowan—	Road 1006, providing important connection between Salisbury and NC 152. Facility is 18 ft. wide and carried 2,000 vehicles per day. Length, 7.5 miles.
Anson-Stanly—	Replace bridge over Mill Creek south of Aquadle. Present low water structure has width of 11 ft. and carries 100 vehicles per day.
Mecklenburg—	Widen road 2018 and 17-84. Facility provides a connection northeast of Charoltte with oil terminal facilities at Thrift. Facility is too narrow to serve heavy truck traffic. Carries 1,700 vehicles per day. Length, 2.8 miles.
Mecklenburg—	Widen road 3687, which provides connection from NC 51 north of Pineville toward Charlotte and will serve new high school. Present 16 ft. facility carries 2,000 vehicles per day. Length, 2.8 miles.
Mecklenburg—	Widen road 1205, 1191. Facility provides a connection from US 29-74 to NC 160 in vicinity of Douglas Municipal Airport. Present 18 ft. road carries 2,200 vehicles per day. Length, 1.5 miles.

(Continued on page 22)



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

Division Correspondent

PHOTOGRAMMETRY — New Draftsmen in Photogrammetry are *Robert R. Wood* of Raleigh; *Robert H. Moore*, Morganton; and *Joanne Wilkerson* from Hartsville, S. C. Mr. and Mrs. *E. J. Page* visited friends in Washington, D. C. Thanksgiving. The Department's 23 employees expect to be in their new quarters in January. Chief Photogrammetric Engineer *E. J. Page* reports that some 4000 square miles of aerial photography have been covered since June.

PLANNING—Employees are now permanently stationed in their new quarters in the basement and invite fellow Highway workers 'to come see us.'

CONSTRUCTION — Welcome to *Olivia Strickland*, new Steno I. The best of wishes to *J. B. Cutchin*, who retired November 30. *Mrs. Virginia McDonald* and family visited Arlington, Virginia over the Thanksgiving Holiday. *Barbara Williams* spent Thanksgiving in Maryland.

BRIDGE MAINTENANCE — Our very best wishes to *C. B. Patton*, Bridge Foreman from Sanford, who retired October 1 after 28 years' service with the Commission; and to *James G. Twiford*, who retired December 1 after 24 years of service. *Ruby Jean Jones* vacationed for two weeks in Tampa, Florida the last of November.



Many departments celebrated Christmas with private parties, but the Public Relations Department went all out and opened its doors to everyone in the Highway Building at an "open house" on the last work day before the holidays. The picture at the left shows one group that dropped by for punch and cookies. In the picture at the right, Mrs. Jewel Adcock, pours punch.

BRIDGE—New trainees in the Department are: *Shanks M. Bradsher, Jr.; James H. Medlin; Jimmy D. Lee;* and *Charles D. Adkin. L. C. Dillard* attended the SASHO Convention at Miami Beach, Florida in November. He acted as Chairman of the Standing Committee on Bridge Design and Construction. *George T. Parkin* and *K. L. Horton* attended the Prestressed Concrete Institute Convention in Miami Beach in November. Congratulations to *George T. Parkin* who became a "granpa" on August 11. His son, Harry and his wife became the proud parents of Thomas Underwood. A grand time was had by all Bridge employees at their annual Christmas party at the Tar Heel Club, December 22.

ACCOUNTING—It's nice to have *Barbara Edwards* as a new Key Punch Operator in the IBM Section. The best of luck to *Russell Clark*, who transferred to the Dept. of Welfare, Nov. 30. *Ervin Dixon* attended the SASHO Convention in Miami, Florida, Nov. 23-25. Congratulations to Mr. and Mrs. *Gene Murray* upon the birth of their baby girl, Janice, Dec. 9 in Rex Hospital.

PURCHASING — Welcome to *Charlotte Cameron* of Dunn, the new Steno replacing *Cleo Brewer*. *Betty Wilkins* spent the Christmas Holidays on a trip to Florida with her family. Congratulations to *Martha May's* husband, Jeff, who recently made Tau Beta Pi Honor Society at State. Our heartfelt sympathy to *Jack Munns*, whose father died Dec. 12. *Lena Morgan* and *Kay Denton* are now in their File Room quarters in the basement. Purchasingg and Central Services exchanged presents at their Office Christmas party Dec. 23.

PERSONNEL went all out for their Christmas party and dined and danced at Johnny's Supper Club. Westward bound! *Betsy Shelton* flew to San Francisco, California, Dec. 16 for a three-week visit over the holidays with a special friend.

FEDERAL CONTACT—Employees held their Christmas party at the College Inn, Dec. 21. Gifts were exchanged.

LOCATION—It's nice to hear that *Earl Crump* is now out of Watts Hospital and recuperating satisfactorily at home in Durham. We all miss him and hope that he will soon be back at work. *H. Boyce Midgett* and family spent the Christmas holidays with his family at Buxton.

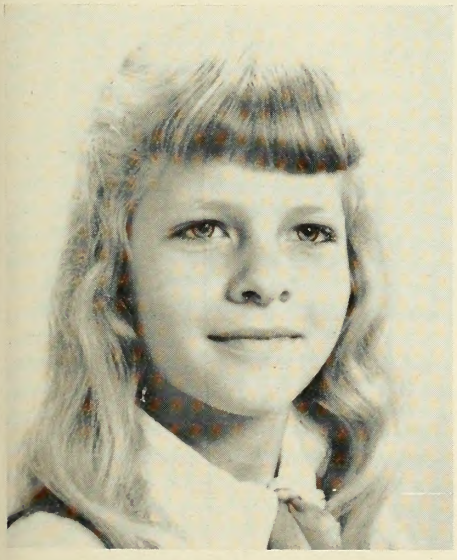
Frances Smith and her family went to Rocky Mount to be with her parents during Christmas.

LEGAL—Employees exchanged gifts at their Office Christmas party, Dec. 23. It's nice to have *Mary Lib Green* back at work after a month's illness.

MATERIALS & TESTS—*Lucille Crawford* left Dec. 18 by plane for Albuquerque, New Mexico for a two-week visit over the Christmas holidays with her sister and brother-in-law, Mr. and Mrs. Ward Honeycutt. She'll be gone til New Year's Eve. *J. E. Thompson* and family visited relatives in Dade City, Florida, Dec. 16-23. Fellow employees have sympathy for *James Garner* and *Bob Peele* who have been deer hunting several times recently and returned empty-handed.

TRAFFIC ENGINEERING — *Harold Rudy* and his family spent the week after Christmas visiting his parents in Sarasota, Florida.

SECONDARY ROADS — Governor Hodges' gain is our loss. Highway employees miss *Harold Makepeace*, beloved Secondary Roads Chief, who left to become Secretary to the Governor. The best of wishes to Mr. Makepeace in his new position! Welcome to new Secondary Roads Chief, *John Swain*. From his vast experience and fine qualifications, we can be assured that he will do a fine job. The Office Christmas party was held Dec. 20 at *Sallie Shimer's* home on Webb Street. *George Willoughby* vacationed the week after Christmas at his home in Dunn. *Carol* and Benny *Helton* spent a week after Christmas with their families in Hendersonville.



Cute Cathy Sterling is the blonde, blue eyed danghter of Mrs. Ann Sterling in the Safety Department. She is ten years old and a fifth grade student at Garner School.



Bituminous engineer Graham B. Egerton retired on Dec. 1 and fellow employees honored him with a party on his last day at work. Shown presenting him a gift is T. V. Fahnestock. Others in the picture, are, left to right: H. D. Hester, J. D. Walton, W. A. Ellis, and A. R. Cherry.

DIRECTOR'S OFFICE — *Nancy* and Spencer *Hall* spent Christmas with her family in Durham.

RIGHT OF WAY—Congratulations to *Ernest Dickens Ransdell* of Pinehurst and Jacqueline McCarthy of Norfolk, Va., who were married Dec. 12 in the University Methodist Church in Chapel Hill. Employees had a gala time at their Christmas party which was held at the Charcoal Steak House December 16. Welcome to *Miss La Quita Deaton* of Goldsboro who replaces *Bonnie Broadwell*. Miss *Peggy Moore* of Raleigh replaces *Nellie Barnes* who transferred to Equipment as Secretary to *George Brinkley*. Congratulations to the *Brantley Murrays* upon the birth of their new son, Jimmy Ray.

ADVANCE PLANNING — Mr. and Mrs. *Frank Price* are the proud parents of new daughter, Laura Ann, born Nov. 19 in Rex Hospital. The *R. J. Kimley's* entertained the Office staff at a dinner party Dec. 12 at their home on Medway Drive. A grand time was had by all! Welcome to *Cleo Brewer*, new typist, in the Department. *C. O. White* and *Bill Caddell* attended Planning School at the University of North Carolina for two weeks the first of December. *Ann Patrick* spent a week vacationing at her home in Laurinburg over the Christmas holidays.

EQUIPMENT—Employees had a grand time at their Christmas party, Dec. 22, at the Charcoal Steak House. After delicious steaks were eaten, gifts were exchanged. Welcome to *Nellie Barnes*, who replaces *Frances Stephenson* as *Mr. Brinkley's* secretary.

DIVISION ONE

By M. ELWOOD COPELAND

Division Correspondent

RETIREMENTS due to disability include Bridge Tender *J. L. Foxwell*, with the Commission since July 1946; and mechanic *Samuel J. Moore* of Creswell. Sam has been sick for several months and we wish for him a complete recovery. Machine Operator *Howard M. Sawyer* of Camden retired the first of the year; *Capt. Jim Twiford* has retired from his duties as bridge foreman of Point Harbor after many years of service, to fish and take it easy; and Sign Supervisor *J. R. Faucette* of Ahoskie retired recently after 35 years of service. Good luck and good health to all our retiring personnel.

WELCOME to *Robert C. Phelps*, who replaces *Sam Moore* at the Creswell Equipment Shop.

NEW ARRIVALS include Betty Jo, young daughter of Machine Operator and Mrs. *J. E. Rhodes;* and a third son at the home of Mr. and Mrs. *Joe Dickens.*

A SPEEDY RECOVERY is the wish of everyone for *R. A. Edmondson;* and we welcome *Matthews Daniels* and *Joe E. Wagner* back to work after illness.

CONDOLENCES to the family of *Dell Thomas* of Manteo, retired employee; Road Oil Supervisor *R. C. Speight*, who died at the age of 92; to the family of *Robert Lee Joyner* of Ahoskie, who died on Nov. 19; to the family of *E. B. Hedspeth* of Jackson and to *W. E. Moore* of Plymouth, who lost his father recently.

CONGRATULATIONS to *Dick Brewer*, recently elected District Governor of the Ruritan Clubs in the Albemarle District. *D. E. Snow*, *W. H. Batchelor* and *W. M. Smith* attended the Scottish Rite Reunion in New Bern recently and Division Engineer *W. N. Spriull* attended the recent highway meetings in Miami, Fla. *E. A. Walker* of Wanchese has been doing a lot of week end duck and geese hunting with "the limit" results. The *J. F. Wilsons* spent a few days in Salisbury visiting friends.

DIVISION TWO

By ROY D. FRANKS

Division Correspondent

PITT COUNTY chapter, NCSH&PEA held its Christmas Bingo Party at the Highway Garage with over 200 persons attending. Otis and Mildred Banks, along with Division Engineer *Charles Snell*, Assistant Division Engineer *Roy Franks* and *G. C. Phillips* (retired), were among the guests. Representative Walter Jones of Farmville, guest of *Paul Vaughn*, was recognized. Miss Tillie Thompson, guest of L. B. and Verna Cox, won the big coverall of the evening.

A NEW FACE in the Equipment Department is that of mechanic *L. W. Rowe, Sr.*

NEW PAPAS in the Division are *E. L. Eakes, Jr.*, a son, Edward Christopher, on Nov. 23; *J. B. Dawson*, a son, Robert Brian, on October 25; and *Wilbur White*, who has a boy at his house.



These members of a hunting party bagged 4 deer recently in Croatan National Forest. Left to right L. F. Waters, Shop Foreman, from Greenville; Willie Clements and John Brinkley of the Road Oil Department.

GET WELL WISHES are extended to *Johnny Clemmons* and *Marvin C. Moore*, who have been on the sick list; to *C. D. Bass*, who is recuperating at home; *J. D. Parker's* wife, who recently underwent surgery at Pitt Memorial Hospital. Friends of Charlie W. Davis, retired, will be glad to know that he has recovered sufficiently to be moved from Morehead City Hospital to the Veterans Hospital in Durham.

A VACATION in Chicago was enjoyed recently by the *S. V. Catletts*, who report a delightful time.

HAPPY ANNIVERSARY, *Heber Gray*, who celebrated 39 years with the Highway Commission on December 20.



Making his camera debut is Robert Brian Dawson, young son of Highway Inspector and Mrs. J. B. Dawson, who live at 100 Circle Drive in LaGrange.

DIVISION THREE

By IRENE L. WORLEY

Division Correspondent

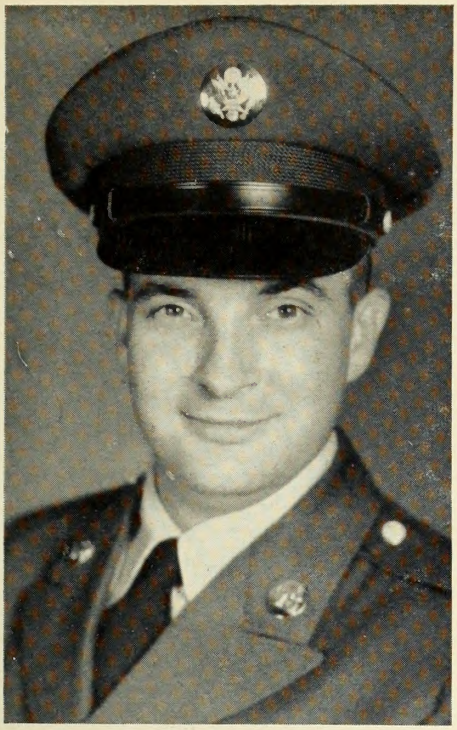
THEY SAID it couldn't be done, but *Joe Bannerman* has proven it is possible to kill a buck!

COMPLETING their season's work, the Road Oil employees closed down Dec. 11 until after Christmas. The annual Christmas party was held at Janie's Oyster Roast.

UNCLE SAM has borrowed the services of *David E. Gurganus* for a few months.



Mr. and Mrs. Arnselth E. Bentsen were married Nov. 21 at the Carolina Beach Catholic Church. The bride is the former Maude Spence, daughter of Mr. and Mrs. Eugene C. Spence of Carolina Beach. Mr. Spence is employed in the Division Three Equipment Department Shop. The groom is the son of Mrs. C. L. Gardner and the late A. E. Bentsen of Miami, Florida and is currently stationed at Wilmington with the U. S. Coast Guard.



Pvt. Charles S. Horrell, now stationed at Fort Jackson, S. C., worked in the Division Three Equipment Department Shop at Wilmington prior to his induction. His friends wish him good luck during his tour of duty.

WELCOME BACK, *D. R. Porter* and *T. M. Watson*, who were transferred back to Division 3 from the Sixth.

VISTORS from Utah were welcome guests of *C. C. Parker*, who enjoyed a pre-Christmas visit from his daughter, Mrs. H. R. Wells and family of Ogden.

GET WELL QUICK, *W. V. Coley*, Equipment Superintendent, who was a patient at James Walker Memorial Hospital at this writing.

CONDOLENCES to *H. H. Watson*, who recently lost his father; Goley Smith in the death of his mother; and *Mrs. Wallace*, secretary to Division Engineer *McKim*, in the death of her brother-in-law.

DIVISION FOUR

By SARAH ANN BUNN

Division Correspondent

BACK TO SCHOOL for these people who are attending Engineering-In-Service Training Course classes: *P. J. Anderson, B. E. Bissette, Robert F. Coleman, D. R. Creech, J. A. Hodge, John C. Howell, Luther Lamm, P. E. Lane, E. E. Parris, Irvin E. Penny, D. W. Stehley, J. W. Vick, Gerald Fleming, Dan Godwin, M. W. Moore, M. E. Barwich, Joseph Herring, Eddie Hester, George Eason, V. A. Jones, James M. Long, J. E. Skinner, H. M. Batchelor, James Ethridge* and *C. W. Thorne*. The instructor is *Curtis E. Collier*.

SUPPERS and bingo parties were enjoyed recently by the Wilson and Wayne County chapters of the Employees Association.

GET WELL WISHES to *M. D. Freeman* of the Equipment Department, who is recuperating from a recent illness, and to *Paul Fulghum*, who is hospitalized at this writing.

VACATIONERS and hunters from the Division include *K. R. Hill, Steve Haynes, Leland Davis* and *Bill Garris*. Division Engineer *Ed Koonce* reports a delightful time while in Miami attending the SASHO meetings.

WEARING A SMILE these days is *Frank Martin*, whose Hammond Street Bridge at Rocky Mount, has finally become history. Congratulations, Frank. Bypass 117 around Mount Olive has been opened to traffic.

SYMPATHY is extended to *W. W. Jones* in the recent death of his father at Elizabeth City.

CONGRATULATIONS to Mechanic *Ralph Willis*, whose daughter Frances, presented him with a granddaughter, Rebecca Ann Bowser.

RECENT ARRIVALS in District One are *H. R. Geddie, Bill Dillon, Larry D. Bailey, R. T. Mitchell, A. L. Lewis, Alfred Barefoot* and *D. G. Hairr*.

DIVISION FIVE

By PEGGY BRIGHT

Division Correspondent

WELCOME BACK TO WORK *A. G. Davis, O. L. Honeycutt, J. R. Johnson, B. L. Perry Furman Pollard, W. T. Southall, H. T. Porterfield*, Resident Engineer *William E. Hawkins, Jr., M. A. Ellington* and *Joe Greenway* who were on the sick list for a while but have improved and are back at work again.

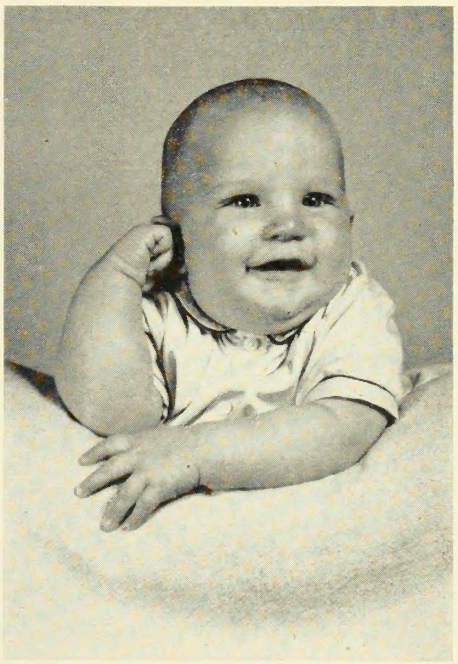
ITS A GIRL for the *Cloyce B. Alfords*. They named her Mary Lynnette. Cloyce is Engineering Assistant in the Division Office.

LADIES NIGHT was held recently in Durham County, with barbecue and brunswick stew on the menu, followed by square dancing. Granville County employees held a similar get-to-gether at the National Guard Armory in Oxford, with around 165 persons present, including the *Hunter D. Irvings* and other guests. Person County employees were hosts at a barbecue and brunswick stew supper and square dance also. Safety Engineer *H. D. "Tarvia" Jones* had the Safety Award on display for everyone to see.

CONGRATULATIONS are in order for *Quinton L. Sorrell* on his promotion to Area Construction Engineer; and to the *B. F. Wheelers*, who recently moved into a new home on Milton Road.

SPORTING a 10-gallon hat with a wide blue band that reads "The Big Blue—Hickey No. 1—Tar Heels" is *John W. Fuller*.

HOLIDAY VISTORS include Mr. and *Mrs. Leon Harris*, Cheryl and Russell, who visited in Roanoke Rapids with Mr. and Mrs. *Arthur Morris;* and Mr. and *Mrs. C. M. Bright* and Starr, Honor and Jeff, who visited in Beaufort with the R. P. Humphreys. *Kirk Duncan* and *Walter Mangum* enjoyed a bit of coastal fishing recently and *W. T. Moore, B. B. Sumner, V. R. Overton, Jr., G. S. Jacobs* and



"Let's talk business about that road out there" says Randall Berkley Roberts, six-months-old son of Mr. and Mrs. Ralph Roberts of Division 5. Ralph who's employed in the Equipment Department, also has two daughters.

M. L. Mangum bagged three geese at Mattumuskeet. *W. L. Reams* holds the title of champion squirrel hunter in Granville County. His average is two squirrels per box of gun shells. *Alvin & Frank Laws* were very disappointed this year because they did not bag a buck deer.

DIVISION ENGINEER and Mrs. *J. W. Jenkins* took advantage of their trip to the Miami convention to visit a few friends en route home on the West Coast of Florida.

DIVISION SIX

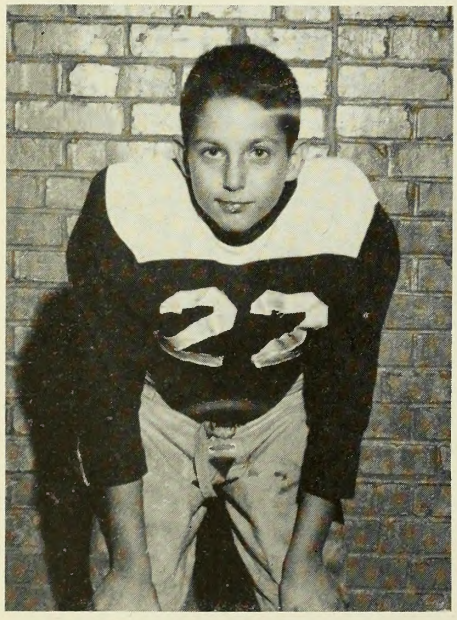
By STEVE AMMONS

Division Correspondent

OUR DIVISION was sadened by the recent death of Division Engineer *Lewis Whitfield*. Heartfelt sympathy goes out to his wife and family.

BEST WISHES for a speedy recovery are extended to *Dick Prevatt*, who finally returned to his home in early December after being hospitalized for several months due to an off-the-job accident; to *G. G. Fowler*, who has had an extended illness and plans to retire on disability soon.

WELCOME BACK TO WORK *L. J. Russell*, *J. G. Graham* and *J. C. McCaskill*, who have been out because of illness.



Sixth Division Engineer and Mrs. J. W. Spruill attended the Pop Warner Midget football game in Nazareth, Pa., where their son, Jacky played fullback for the Lumberton Rams, and was one of the team captains. Yonng Spruill, 13, averaged 31 yards kicking, with his longest punt traveling 60 yards.

DIVISION SEVEN

By P. L. WELCH

Division Correspondent

WELCOME back to work, *Mrs. Mary Dot Jackson*, stenographer in the First District Office, who is the mother of a bouncing baby boy. *George R. Bouldin*, Area Foreman in Rockingham County, has returned to work after a two-months illness. Others back at work include *Charlie Greene*, Machine Operator at Camp Burton; *Andy Gates* and *Winder W. Wilson*. A speedy recovery is wished for *C. C. Painter's* son Keith, injured while playing; Mrs. *W. H. Smith* and Mrs. *Edward M. Rowland, Jr.*, recent patients at Memorial Hospital in Danville; and *James H. Lunsford*, who was hit by a car while working on his tractor.

THREE CHEERS for *Elgie G. Bush*, Caswell County Machine Operator, who killed two deer this season! *C. I. Walters* went deer hunting on the Umstead Reservation, and also spent several days bird hunting down East. No report on his luck though. Bidding farewell to the fishing season, *Ira O. Cooke* spent a few days at Surf City and *F. C. Ridge* and *H. G. Rudd* tried their luck at Long Beach.

SYMPATHY is extended to *C. C. Painter*, in the loss of his uncle, A. O. Painter of Roxboro; *William Atkinson in the* death of his brother; *W. W. Sharp*, in the death of his mother; and *Mrs. Mary Dot Jackson* in death of her four-year-old nephew.

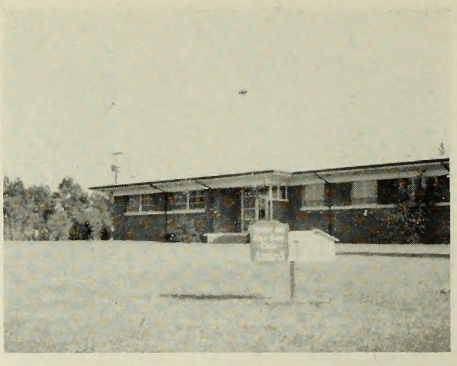
A FALL VACATION was enjoyed by the *J. B. Taylors*, who visited the Blue Ridge Parkway and other points of interest.

WELCOME to our new District Engineer in the First District, *C. C. Painter*, took over his duties in November. He and his family are making their home in Dogwood Acres, Burlington.

The only thing worse than trying to shave with a razor after the wife has sharpened a pencil with it, is to try to write with the pencil.

Be careful of the words you say,
Be sure they're soft and sweet;
You never know from day to day
Which ones you'll have to eat!

The sports car owner's description of the U. S. standard automobile: A 4-eyed, 2 horned, pink and purple ethyl eater.



Division Engineer T. C. Johnston, Jr., and his staff are proud of the Aberdeen Home and Garden Club Award which was presented to the Eighth Division office for the most beautiful lawn and grounds in Aberdeen.

DIVISION EIGHT

By VIRGINIA S WILLIAMSON

Division Correspondent

CONGRATULATIONS to the *James E. Garners* on the birth of a son; Engineering Aide and Mrs. *W. L. Cockman* of Siler City, who have a son; and to the *John W Walkers* of District II, who are new parents also. Last, but certainly not least, congratulations to the *Prentiss Lee Pattersons* on their new baby, rounding their family out to an even dozen.

THE TURKEY BOWL at Roanoke saw VMI trounce VPI, and on hand for the occasion was *R. G. Southall* and his wife, who report a delightful time.

RUMORS in this division have it that *Miss Gene Morton* just may skip off during the holidays and get married. *Guy L. Hunt's* daughter Peggy Ann was married recently to Howard E. Lewis. Both are employed at Acme Hosiery Mills in Asheboro.

HOME FOR THE HOLIDAYS from East Carolina College was Robert L. Darden, son of the *W. H. Dardens* of Montgomery County.

GOOD LUCK was reported by *J. E. Lee* and friends who caught about 200 pounds of spots at Cherry Grove Inlet Pier.

A NEW HOME has been started near Rockingham by *Z. W. Grant*.

SYMPATHY is extended to *R. G. Southall* in the death of his brother, *S. O. Southall*, Resident Engineer at Wilson; to Mrs. *L. E. Whitfield* in the death of her husband, former division engineer in this division; to *Gordon Brooks* in the death of his father; to the family of Highway Inspector *Julius Barefield*, who was fa-

tally injured in an automobile accident; and to the family of *Henry Borst*, who died recently.



E. C. Darden of Rockingham wears the smile of a newly-appointed District Engineer. Darden formerly served as ROADWAYS correspondent for the Eighth Division.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

A BIRTHDAY SUPPER honored Equipment Superintendent *V. C. Freeman* recently. The honor guest claims the same age as Jack Benny (39, of course).

MY LUCKY DAY, says Mechanic *R. W. Wright*, of the day, December 7, when he returned to work after being out since last June when he was injured in an automobile accident.

WELCOME BACK, *J. R. "Friday" Fritts*, to the Construction Department, after a two-year hitch in the Army. He spent a good deal of his time in Germany and we hear he has some very interesting stories to tell.

GET WELL WISHES are extended to *M. L. Thomas, Jr.*, who underwent surgery as the result of an on-the-job accident; *Mrs. J. W. Beck, Jr.*, Mrs. *O. P. Tysinger*, Mrs. *M. A. Beck* and Mrs. *J. F. Smith*, all of whom have been in the hospital recently.

WE REGRET to report the following deaths: *J. C. "Shorty" Gwin*, who had been with the Highway Commission for 25 years and will be missed by those who worked with him in the Construction Department; Pamela Williams, infant daughter of truck driver and Mrs. *Cecil Williams;* Walter Lee Duggins, brother of *Frank Duggins;* and T. J. Corns, father-in-law of *Robert Vernon*.



The center of attention in the S. O. Tally home is little Rebecca Lynn, nine months old. Tally is employed by the Construction Department in Winston-Salem.

DIVISION TEN

By C. R. SMITH

Division Correspondent

DEER HUNTERS from the Sign Department this season are *Hoyle Earnhardt* and *C. S. Honeycutt*. Hoyle brought in a 4-point buck, but Huneycutt's past luck just wasn't with him this year. *James H. Flake* has the strangest luck, or either he has his dogs mixed up! He took his coon dogs out and they treed three opossum; later he took the opossum dogs out and they treed—you guessed it, three coons! *Earl Brinkley* and his wife have returned from a 6,700-mile trip to New Mexico, Colorado, Mexico and South Dakota. They met with a group of 13 in the Black Hills and spent five days enjoying their annual pheasant hunt. They bagged the limit and enjoyed it all.

FISHERMAN *W. T. Smith, Claude R. Ridenhour, Joel Tucker* and *Doug Sasser* spent several days at Wrightsville Beach and brought back over 300 fish. *J. N. Bost, Dewitt Green, C. H. Faggart* and his brother ran into bad luck and weather on their trips to Cherry Grove Inlet. Later they drove to Pawley's Island, where one speckled trout was landed before a cold front moved in and they moved out. *Charles Nance, Harry Long*, brother Bob and party had a very successful rabbit hunt. They bagged a dozen rabbits, four squirrels and several quail. *Joe McNee* of Mecklenburg County went on his annual rabbit hunt and brought back the legal limit; while *H. N. McWhirter* and his wife found fish not very plentiful on their recent trip to the coast.

PARTIES highlighted our holiday season. Maintenance employees held their party at the American Legion Hut, with about 90 people present. A barbecue dinner was followed by dancing. Maintenance employees of Steele Creek Camp held their party at the Club House. A country ham dinner with grits and eggs was served, and gifts were presented to the youngsters. *T. F. Royall* and *W. M. Crowder* were guests at a supper given Montgomery County employees. Pork barbecue, chicken stew with all the trimmings, was served to those in attendance.



Tammy Elette is the three-month-old daughter of Mr. and Mrs. C. L. Allen of Statesville.

DIVISION ELEVEN

By CORA LEE GREER

Division Correspondent

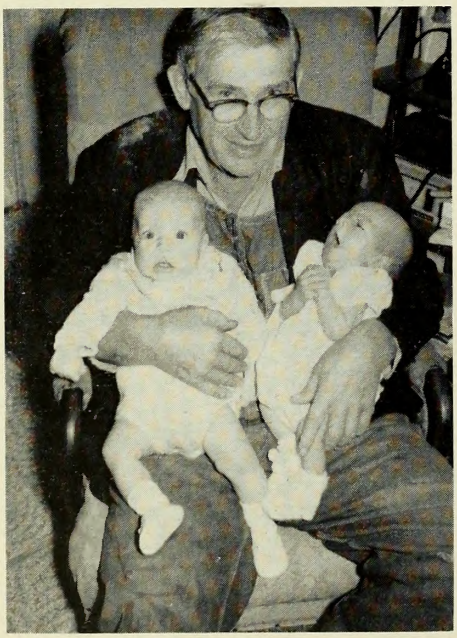
PARTIAL REPORTS from our hunters indicate good luck. *Deward Hart, Ralph Jennings* and *Bill Shepherd* got deer. Glenn Stewart also brought back a 6-pointer. *J. D. Gwyn* of Surry County Maintenance went rabbit hunting and it is reported that one of his dogs went wild and he had to set a rabbit warren to catch the dog!

WE REGRET to report the death of Ashe County Foreman *Fields Absher*, who was killed by a prisoner while unloading prisoners for work. Sympathy is extended to his family.

A VISIT with his parents was enjoyed by John H. Winkler, Jr., en route from Anchorage, Alaska, to Tripoli. John is a geologist with Western Geophsical.

GET WELL QUICK, *Efird Day* of Landscape. *J. C. Bray, H. W. Whitaker, J. F. Hanes, J. F. Driver* and *R. G. Pennell* have returned after recent bouts with sickness.

CHRISTMAS in Florida was enjoyed by the *Jack Gwyns*, who spent a few days in St. Petersburg.



L. H. Barrett of Cleveland County appears to have his hands full with the latest additions, two grandchildren.

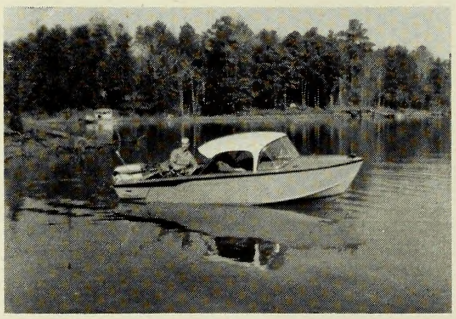
DIVISION TWELVE

By JEAN CLINE

Division Correspondent

A SUPPER honored *L. H. Dean*, who has been promoted to Construction Engineer in the Fayetteville area. A gift was presented to the former Resident Engineer. *F. T. Wagner* is the new Resident Engineer for Statesville area.

CONGRATULATIONS on these new arrivals: Joseph Kirk Lackey, born on Thanksgiving Day, to the *Robert J. Lackeys;* to Mr. and Mrs. *Marvin Byars* on the birth of a daughter; and to Mr. and Mrs. *Edgar Wilcox* on the birth of a daughter, Rita Dianne.



D. A. Junghans takes time out from his work with the Charlotte construction group to do a little fishing in the Catawba River.

PARTIES started the holiday season rolling in the Division. Iredell County employees and families, numbering more than 200, attended the annual party on December 18 at the Monticello School Cafeteria. Employees in the Division Office held their party on Dec. 23. Celebrating the holidays with trips were the following: District Engineer and Mrs. *P. D. Miller*, who went to Summit, N. J., for a first look at little Debra Ann, their three-month-old granddaughter; the *R. W. Connollys*, who enjoyed a Florida vacation; the *John Bradburns*, who went to the Sunshine State to visit their daughter and family; and Division Engineer and Mrs. *E. L. Kemper*, who were in Miami for the SASHO meetings.

SYMPATHY is extended to *R. W. Connolly*, who lost his father; and to *Fred Summers*, whose brother, Dr. Dent Summers, a promising young surgeon, died recently.

ADDITIONS are reported by Foreman *C. V. Tilley*, who gained two daughters-in-laws through the marriage of his two sons; and by Foreman *Vance B. Reavis*, who gained a daughter-in-law through the marriage of his oldest son.

BACK AT WORK after illness are *L. C. Mills, G. S. Henley* and *H. C. Hastings*. On the sick or injured list but much improved by now, we trust, are: *J. R. Poston, J. W. Jolley, Fred M. Harrill, Andy Meade, A. F. Simmons, Floyd Warren, A. J. Mitchell*, Mrs. *John Bradburn*, Mrs. *W. H. Tomlin, J. E. Mayberry's* small daughter; *R. A. Harris, Hayden B. Rhyne's* two children and *W. H. Chapman's* son.

THE SPORTSMEN have been having bad luck recently. *Gibb Bowles* and *Bob McLain* enjoyed deer hunting at Brown Mountain but saw only one or two and bagged none; while the fishing wasn't any better for *Charles Mauney* and *Clyde Moore*, who motored to Village Point, only to find the weather unfavorable for fishing. *Claude Gaither* is constructing a new pole barn on his land at Harmony for the purpose of raising quarter-horses and Mexican burros.

GET WELL WISHES are extended to *J. D. Redfearn*, who has been released from the hospital after suffering a heart attack. Welcome back to work *H. G. Morris* and *George C. Allen*, who have been hospitalized recently.

SYMPATHY is extended to the family of *Kin M. Ridenhour*, an employee of the State for 15 years, who died recently.

CONGRATULATIONS are in order for Mr. and Mrs. *Fred B. Kirk*, on the birth of a son, Fred Jr., on Dec. 4.

SORRY to hear that *Rufus Knox* retured to the hospital because of a slipped disc. *F. B. Ranson, Jr., W. L. Brown, Johnny Jones* and *Perry Ferguson* have been on the sick list too.



This is one of several new type signs installed on major highways entering North Carolina from other States in Division 14. The above is on US 23-441 at the Georgia State line. In front of the sign are Eugene Turpin of Traffic Services Dept., Frank Bryson, Sign Supervisor in the Division and J. B. Cunningham, Sign Shop Foreman.

VACATIONS during the holidays were enjoyed by *J. W. Trexler; Grier Alexander*, who spent two weeks in Florida; Les-

ter Pender, who drove his new Pontiac to Mississippi and *J. B. Pridgen* who visited his family in Salisbury.

CUPID made the news too. *H. R. Polk* presented his girl, Shirley Houston, with a beautiful diamond; and *Earnest L. Hunter* tied the knot recently.

CARS aren't what they used to be, according to *James K. Jordan*, who was teaching his son to drive the new Ford. He reports no transmission and only a little motor left! *Swain T. Moore* is sporting a pretty new Impala these days.



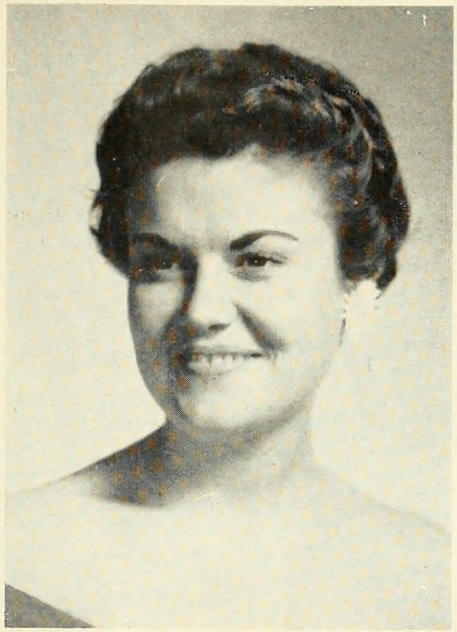
Airman 3-C James B. Banks, son of Sign Erector and Mrs. J. B. Banks of Weaverville, who is serving in the Azores Islands. A graduate of North Buncombe High School, he attended Western Carolina College prior to his enlistment in the Air Force.

DIVISION THIRTEEN

By DAN TURNER

Division Correspondent

FLORIDA vacations have been enjoyed by several of our families. The *S. E. Hollands* visited Ft. Myers and St. Petersburg. Mrs. Holland is employed at the Asheville District Office. Materials Inspector and Mrs. *W. H. Stevens* enjoyed a trip to Jacksonville, St. Augustine and St. Petersburg; and *F. K. Westwood*, Construction Engineer, also enjoyed a Florida vacation.



Presenting June Peterson, new employee in the appraisal department at Asheville, June is a graduate of Tipton Hill High School and Blantons Business College.

CONGRATULATIONS are in order for Mr. and Mrs. *Herman Kennedy, Jr.*, who are the parents of a daughter born on Nov. 27.

THE SHRINE BOWL football game in Charlotte attracted the *George R. Prescotts*.

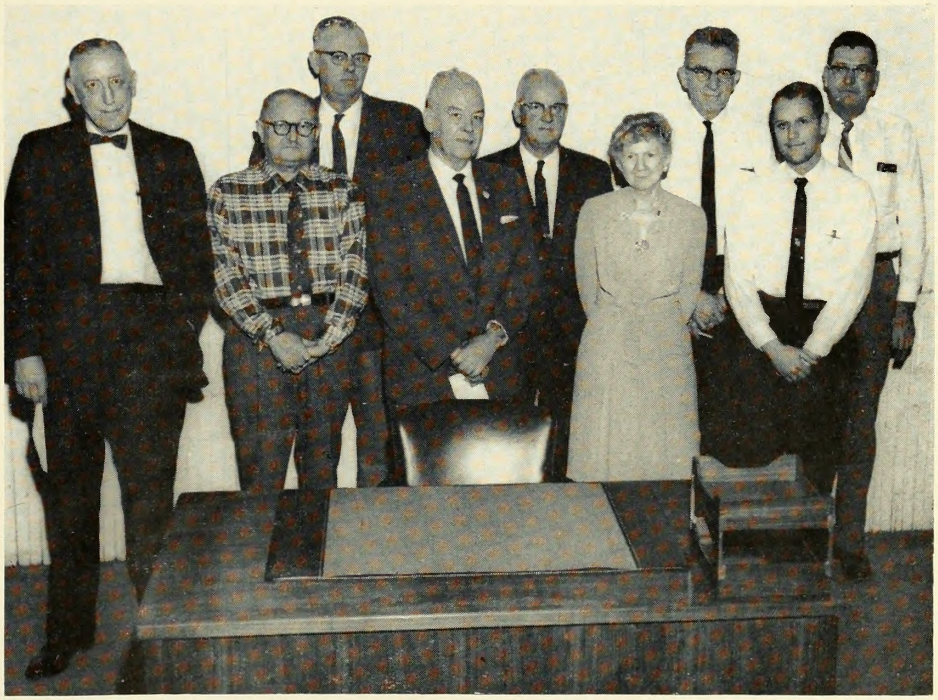
C. E. Proudley Retires To Private Business

C. E. Proudley, head of the Department of Materials and Tests, retired in January. After a trip abroad, Proudley will return to his Raleigh home to engage in private practice as a Construction Material Consultant.

Proudley came with the Highway Department as an Engineer of Materials and Test in 1936, and was made a Department head in 1943. He was named State Materials Engineer in 1955.

He is a 1927 graduate of George Washington University with a B. S. in Civil Engineering and the Professional C.E. degree in 1933. Recently he was appointed by Governor Hodges to the Standardization Committee of the Department of Administration.

Employees of the lab honored him recently at a going-away party, and presented him with a walnut desk and chair, to be used in his private business.



C. E. Proudley, retiring Engineer of Materials and Tests, is shown with the desk and chair which was presented to him by lab employees. Left to right: C. T. Carmichael, L. D. Hicks, C. L. Smith, Proudley, H. D. Irving, Mrs. Helen Brothers, A. D. Morgan H. Fred Waller, Jr., and C. G. Phillips.

Sampson County Bridge Goes Up In Record Time

A 210-foot heavy duty concrete bridge, precast at a plant near Durham, was laid across a Sampson County stream in a matter of days instead of weeks or months as was formerly required to build such a structure.

Only three or four days was required to lay the massive slabs on pilings already in place. When completed, it had a surfaced roadway 24 feet wide, consisting of seven 30-foot spans. Each of the 70 concrete slabs weighed about 7,000 pounds.

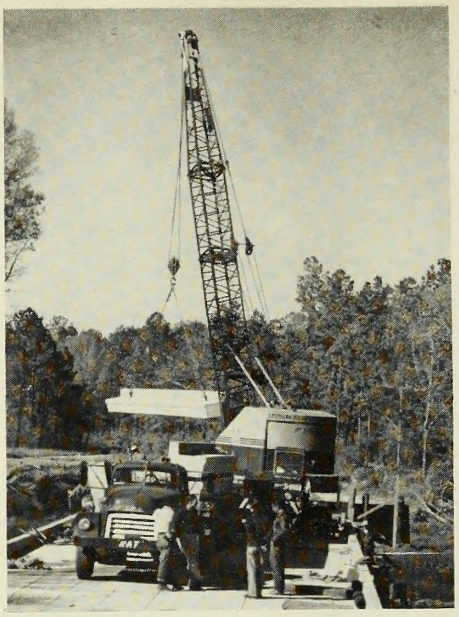
The Great Coharie bridge is the longest of a new-type design worked out by C. B. "Buck" Taylor, veteran bridge maintenance engineer for the Highway Commission, and members of his staff.

This is the fifth such bridge to be built in the State. This new kind of bridge is a tongue - and - grove channel type. The concrete members are prestressed with high-grade steel strands to add strength and are connected by V-shaped joints which enable the slabs directly under a vehicle's wheels to transmit some of the load strain to the slabs on either side.

Prior to placement of the concrete slabs, creosoted timber pilings were driven by bridge maintenance crews. Creosoted bracing was bolted on the piles and temporary struts were placed and later removed. After the spans were placed, steel rails and a wearing surface completed the entire structure.

In its construction, a crane picks the slabs off the huge delivery truck, lays one 30-foot span, then pulls upon the finished span to start laying the next. Economy in construction is one of the bridge's main features.

The main attraction to the motoring public, however, is the greatly reduced detour time when such bridges are built.



Placing curb section on precast concrete bridge.

J. I. Lynch of Clinton is Sampson County bridge superintendent for the Highway Department and J. L. Kirkman of Clinton is foreman in charge of the bridge construction crew.

MAKEPEACE

(Continued from page 6)

ver Award, highest honor presented by the Boy Scouts of America.

He is the son of Mr. and Mrs. O. P. Makepeace of Sanford and is married to the former Helen Sherrill. They have one son, Richard.

Although the Makepeaces have a home at 335 Carbonton Road, Sanford, they also maintain an apartment in Raleigh.

SWAIN

(Continued from page 6)

The new head of the Secondary Road Department assisted in the development of the Raleigh-Durham Airport and served as chairman of the Airport Authority for six years. He is owner of the Credit Bureau of Raleigh. Swain also was chairman of the Wake County Tuberculosis Sanitorium for 18 years and served a one-year term as president of the Associated Credit Bureaus of North Carolina.

He is a Mason, a member of the Edenton Street Methodist Church and a director of the Carolina Country Club, and served as director and secretary-treasurer of the Raleigh Golf Association since its formation in 1929.

Swain is married to the former Mary Allen of Raleigh and they have three children and six grandchildren.

Newsman Praises NC's Highway Progress

A recent trip to Florida has prompted editorial comments in the GREENSBORO DAILY NEWS on North Carolina's highway network, by newsman Henry W. Kendall. Here are some excerpts from his column:

"North Carolina may be lagging in many respects but not in highway progress and construction if through routes in South Carolina, Georgia and Florida offer a sound basis of comparison.

"A drive of some 800 miles across these states, involving US Routes 301, 1, and 17 and embracing such cities as Savannah and Jacksonville, shows, not even in urban approaches, any appreciable stretch of interstate, limited access highways; no complicated interchanges or cloverleafs such as are commonplace in North Carolina and no bypasses which take you completely around congested areas in the manner that has been done, say around Durham, Greensboro, High Point, Salisbury and Charlotte in the Old North State.

"Through routes still go right down the main street of most of the S. C., Ga., and Fla. municipalities. Where there are socalled bypasses, or alternate routes, they do not wholly avoid urban centers but leave you with piled up traffic and innumerable 'stop' lights."

Highway Conference

North Carolina State College will be the scene next month of the Second Annual State Highway Conference.

This year's conference will be devoted to the planning and design of highway facilities as they affect construction, maintenance and traffic service.

Among those invited to the conference are more than 350 highway personnel from Raleigh and throughout the field.

Outstanding speakers from North Carolina and other states will take part in the three-day program which gets underway Tuesday, February 2 and will continue through Thursday, February 4.

PERSONNEL

(Continued from page 5)

Plans were made to conduct these classes over a fourteen week period during the winter months when construction work had to be curtailed throughout the state. Some discretion was left to the Division Engineers to select the starting date in such a manner as not to intefere with work schedules in the various Division. As a result, Division 4 began classes on December 7; and Divisions 3, 6, 10, and 12 on December 15. In the case of Division 10 and Division 12, they are conducting a combined class in the Charlotte Armory. Divisions 14 and 1 plans to start on January 4; Division 13 on January 6; and Division 7 on January 7.

The classes are to be taught on the division level, and on a weekly schedule. Classes will be conducted one day per week for a period of 14 weeks, except for the first three weeks, which consists of a math review and will require two days per week for the first three weeks.

In order to assist the division instructors in the presentation of the material, and also to try to make sure that a uniform course will be conducted in all divisions, arrangements have been made for J. W. Lee to devote his entire time during the course, going from one division to another giving assistance to the instructors, and helping them to do a more effective job in the presentation of the coursework.

It is hoped that through the coordinating efforts of Lee and the administering of uniform tests and examinations, students throughout the State can be assured of getting the same material. If this can be accomplished, it is hoped also that some arrangement can be made eventually with the State Personnel Department for allowing some credit for promotional requirements.

In order to give the trainees who took the entrance examination, and did not make a qualifying grade a chance to take the course later, we plan to set up some type of math class in order that they and others who may be in the same position, will be able at some future date to take the Surveying Course. Classes such as these can be developed through the North Carolina Department of Education if as many as ten people are interested in such a program at any one location. The Department of Education will provide the classroom and the teacher, and the only cost to the students will be the small cost of books to be used in the course. If there are those who would be interested in such a program, and there are sufficient numbers, please get in touch with the Highway Personnel Office and assistance will be given in getting these classes started.

There is much work that can be done in the way of In-Service Training Programs. The work that has been done in the past is just a starter, and we hope to continue the present program and at the same time expand into other fields. In addition to training the technician area, much can be done to aid our supervisory and administrative personnel to perform their duties better. — **Fred Parker.**

CORRESPONDENCE SCHOOL PROGRAM

In December the Commission announced to the Highway Divisions a policy which will provide for the reimbursement of one-half the cost of a correspondence course satisfactorily completed by an employee. This policy was set up with special emphasis on employees working in the field of engineering. However, it does not preclude employees working in other areas from making application to the Raleigh Office for participation in the correspondence school program. The program has been adopted for the purpose of cooperating to the fullest extent with those employees who desire to increase their knowledge and by so doing more valuable employees to the Highway Commission. The Commission has for some time realized the necessity and important of having better trained engineering technicians and sub-professional employees who could perform a great majority of the work to be done in engineering and at the same time relieve top level engineers for administrative and other technical engineering work. There has and always will be a definite need for well trained technicians within the Highway operations. This is an effort by the Commission to cooperate with those employees who can supplement their actual on the job experience with some formal and organized training.

In order that the employees may know the details of this policy and how it works, we are stating below the points you should know about this plan.

POLICY

It will be a policy of the Highway Commission to reimburse an employee one-half the cost of a correspondence course taken and completed by the employee provided all regulations are met by the course and the employee. Any full time permanent employee, who has served with the Commission for a period of at least one year may enroll in a correspondence course, the subject matter of which is directly applicable to his work, and may expect that one-half of the initial cost of this course will be be reimbursed to the employee upon satisfactory completion of the course. This policy will be retroactive and those employees who have enrolled in a correspondence course since January 1, 1959, will be eligible to participate and will be allowed to submit an application for review.

ADMINISTRATION

1. Application must be made prior to enrollment on a standard application blank through supervisory channels to Highway Personnel Office, who will review applications and make recommendations to the Review Committee.

2. The Review Committee shall consist of a representative from the Highway Commission Personnel Office, the Highway Director's Office, the Chief Engineer's Office, and one other department head picked at random for overall knowledge of the Highway Commission. This committee shall elect a chairman, who shall be responsible for signing all approved applications and chairing the meetings of this committee. Meetings will occur at the convenience of the committee, preferable at least once a month.

3. Only after review and approval of the application may the employee proceed with schooling and be sure of reimbursement. Therefore, unless the employee intends to pay the cost of the school, providing it is disapproved by the committee, he is advised to await approval prior to proceeding with course.

4. Eligible reimbursement cost will not include penalties, breakage, rental fees, or purchase of materials or books.

5. Only courses in those schools deemed acceptable by the Commission will be approved.

6. Refunds will not be made to applicants leaving the Commission prior to completion of the course.

7. Reimbursement will be made upon submission of a certified copy of the invoice from the school in which the course is taken and proof of satisfactory course completion, depending upon the availability of funds. The Highway Director will approve all invoices and forward to the controller along with a request for the issuing of a check to the employee.

Standard applications are being sent to all Divisions and will be available in the Division Engineer's Office.

COMPENSATORY LEAVE AND PER DIEM EXPENSE POLICY

In the past few months you have noticed articles appearing in ROADWAYS concerning a compensatory leave policy for the Highway Commission. In order to bring you up to date on the progress that is being made in regard to compensatory time, you might like to know that the Highway Personnel Department has been working out a detailed policy for Highway employees that is in keeping with the state-wide policy for compensatory leave and at the same time provide uniformity in the way compensatory leave is handled throughout the Commission. The policy being worked on by Highway Personnel Department was discussed in considerable detail at the Division Engineer's meeting in December. As a result of this discussion it was decided that in order to incorporate the joint thinking of both central administration and representatives from field operations, a committee should be appointed to complete the development of this policy and work out the final procedures to be followed in accounting for and administering compensatory time off. Director Babcock appointed T. A. Burton, Division Engineer, in Greensboro as Chairman of this committee and working with him on this committee is Sam W. Badgett, Personnel Officer, H. D. Irving, Assistant Chief Engineer, Ervin Dixon, Controller, R. B. Fitzgerald, Division Engineer, Winston-Salem, L. H. Gunter, Assistant State Maintenance Engineer, and R. W. Dawson, District Engineer. In addition to having responsibility for the development of a compensatory leave policy, this committee was charged with responsibility for the development of a more uniform policy for the payment of subsistence or per diem expenses for Highway employees. This committee will develop the policy to be followed in the per diem expenses allowed in all areas of Highway operations including Construction and Maintenance, also Supervisors and Administrative Heads of Departments.

IMPROVED WORKING HOURS FOR BRIDGE TENDERS

For the past several years efforts have been made to reduce the number of working hours in those areas where our employees are required to work an excessive number of hours as compared with other State operations and with private business. In keeping with this trend in the reduction of working hours, the Highway Commission at it's December meeting approved a five day workweek consisting of twelve hours per day for all Bridge Tenders. This standard work-week will be put into operation as soon after the first of January as possible. In some areas along the coast this will be a considerable reduction in the number of hours now required on some of our Bridge installations. Before the adoption of the new work-week it was not unusual for some Bridge Tenders to work seven days a week which required the employee to work for many continuous hours, or at least he was confined to the job subject to immediate call whenever necessary. In other areas it has been difficult in the past for Bridge Tenders to have the advantage of time off for Saturdays, Sundays, and holidays. Under the new schedules it will be possible for these employees to have this time.

The nature of Bridge Tender work is such that employees in this classification cannot be given the same kind of workweek as other employees. A Bridge Tender, while not working on a constant schedule such as a maintenance employee, is required to be on call when the need for his services arise.

In approving the shorter work-week for Bridge Tenders, the Commission realized that the improvement would cost some $57,000 annually. However, the most important reason for the decision was the Commission's desire for improved working conditions in this area at no sacrifice to the service being given the public.—**Sam Badgett.**

PROJECTS

(Continued from page 11)

Mecklenburg—	Widen road 3128, which provides a connection between NC 27 at Lawyers and NC 51 at Mint Hill. Present 16 ft. pavement carries 1,300 vehicles per day.
Surry—	Grade, drain, surface road 2230, from Siloam northwest of paved county road south of Copeland to provide connection in southeast section of county. Length, 5.3 miles.
Catawba—	Widen road 1453, which provides important connection west of Hickory toward NC 16. Present 18 ft. facility carries 1,500 vehicles per day. Length, 1 mile.
Catawba—	Widen road 1005, which serves as radial route from Hickory to US 64-70-321. Facility is 18 ft. wide and carries 3,000 vehicles per day. Length, 1.4 mile.
Gaston—	Widen road 2302, which serves as important radial route southeast of Gastonia. Facility is 18 ft. wide and carries 3,000 vehicles per day. Length, 1.7 miles.
Gaston—	Widen road 2525, which serves as radial route south of Belmont. Present 18 ft. pavement carries 3,000 vehicles per day. Length, 3 miles.
Gaston—	Widen road 2264 and 22-69, which form a connection between East Gastoia and Dallas. Present 18 ft. pavement carries 2,700 vehicles per day. Length, 2.7 miles.
Cleveland—	Grade, drain and surface road 2226, which will provide a connection in the south portion of the county between NC 26 and NC 198 and also serve the Fiber Industry, Inc., under construction. Length, 4.8 miles.
Iredell—	Replace bridge over Hunting Creek between Harmony and Sheffield, presently 12 ft. wide with six ton capacity.
Lincoln—	Widen road 1005, which provides an important connection between Lincolnton and Newton. Present 20 ft. pavement carries 1,100 vehicles per day. Length, 5.9 miles.
Buncombe—	Road 1003. provides connection between US 19-23 south of Weaverville east toward Barnardsville. Present 16 ft. facility carries 1,000 vehicles per day. Length 7.3 miles.
Rutherford—	Replace bridge on South Church Street in Forest City. Present 19 ft. structure carries 2,000 vehicles per day.
Rutherford—	Road 1756, which will provide a connection from south of Hollis in Rutherford County toward Polkville.
Cherokee-Macon—	Roads 1505, 1400 and 14-01. Facility provides important connection between Andrews in Cherokee County and a paved secondary road in Macon County south of Aquone. Length, 6.5 miles.

Perquimans—	Replace bridge over Raccoon Creek just east of US 17. Facility now carries 200 vehicles per day.
Johnston—	Replace bridge over Neuse River and Neuse overflow between Wilson Mills and Selma. Carries 1,500 vehicles per day.
Granville—	Replace bridge over Tar River south of Dickerson toward NC 96. Carries 250 vehicles per day.
Wake—	Replace bridge over Durham & Southern Railway at Upchurch. Present facility is 22ft. wide and carries 200 vehicles per day.
Rowan—	Replace bridge over Southern Railway between US 70 and NC 150 west of Salisbury. Present facility is 16 ft. wide and carries 350 vehicles per day.
Cabarrus—	Replace bridge over Rocky River and NC 49. Facility is 12 ft. wide and carries 500 vehicles per day.
Mecklenburg—	Replace bridge over Catawba River just south of NC 160. Facility is 18 ft. wide and carries 300 vehicles per day.
Gaston—	Replace bridge over Long Creek between NC 7 and Dallas. Facility is 20 ft. wide and carries 2,200 vehicles per day.
Gaston—	Replace bridge over Piedmont & Northern Railway between NC 7 & Mt. Holly. Facility is 18 ft. wide and carries 2,500 vehicles per day.
Burke—	Replace bridge over Catawba River at Rutherford College. Facility is 16 ft. wide and carries 1,100 vehicles per day.
Henderson—	Replace bridge over French Broad River between US 25 and NC 280. Facility is 12 ft. wide and carries 500 vehicles per day.
Chatham—	Replace bridge over Deep River at Carbonton. Facility is 12 ft. wide and carries 250 vehicles per day.

STATE CONSTRUCTION FUNDS—Cost, $2,500,00

County	Description
Currituck—	10 miles of grade adjustment and sand asphalt surfacing on NC 168 from Sligo to the Virginia line.
Bertie-Hertford—	3 Miles of grade adjustment and resurfacing on NC 350 from Aulander to Ahoskie.
Bertie—	Grade adjustment and resurfacing 5600 ft. of 20 ft. pavement near Conine Creek, 3 miles north of Williamston; also 1300 ft. of 24 ft. pavement at Roquist Creek, 3 miles south of Windsor.
Beaufort—	Surfacing through town of Pantego on US 264.
Beaufort—	.55 mile widening, storm drainage, curb and gutter and surfacing from NC 58 north on US 258.
Beaufort—	Surfacing from a point .7 mile southeast of Stokestown on NC 102 to Beaufort County line.
Jones—	Surfacing on NC 41 from Comfort eastward for 2.4 miles.
Pamlico—	New construction through town of Oriental on NC 55.
New Hanover—	Surfacing Wrightsville Avenue from Wilmington CL to Cape Fear Hospital, 2.75 miles.
New Hanover—	Base course for shoulders, paving and 3 inch curb on project 3598.
New Hanover—	Clearing Charity Cross Roads right of way.
New Hanover—	Resurfacing Waynick Boulevard (US 76) in Wrightsville Beach.
Duplin—	Widen, storm drainage, curb and gutter in Rose Hill on US 117.
New Hanover—	Curb on Ship Yard Boulevard near Wilmington.
New Hanover—	Channelization of NC 40, US 17, US 74. & US 74 and US 76 and acquistion of right of way.
Duplin—	Resurfacing on NC 24 from Beulaville to Onslow County line, 6.2 miles.
Johnston—	Resurfacing on NC 42, from US 70 at Clayton to Wilson County line, 17.5 miles.
Nash—	Resurface US 64 from Nashville to Rocky Mount, 9.8 miles.
Wake—	Resurfacing on US 401 to Harnett County line, 4.7 miles.
Person—	Resurfacing on US 501, from junction US 158 in Roxboro, south for 5 miles.
Durham—	Resurfacing Duke Street from Leon Street to Ruby Street in the city of Durham, 0.24 mile.
Robeson—	Resurfacing on US 301 from Cumberland County line to the intersection of Lumberton Bypass 3 miles north of Lumberton.
Robeson—	Resurfacing on Lumberton bypass (US 301A) from a point 3 miles north of Lumberton to the intersection of US 74 in Lumberton.
Robeson—	Resurfacing on US 74 from intersection of US 301-A in Lumberton to Airport Road south of Lumberton.
Robeson—	Carthage Road in Lumberton.
Guilford—	Resurfacing and widening on NC 150 from intersection of NC 68 at Oak Ridge to the Forsyth County line, 3.7 miles.
Rockingham—	Widening and resurfacing on US 220, from south end of Dan River Bridge at Madison to intersection with project 8.15902.
Guilford—	Widening and resurfacing on NC 100, from intersection of US 70-A at Whitsett to Gibsonville, 2.2. miles.
Scotland—	Widening and resurfacing on US 501, from Laurinburg to Robeson County line, including culverts and bridge.
Davie—	Widening and resurfacing from Mocksville north on US 601, for 6.2 miles.
Stanly—	Widening and paving on NC 27 from junction with NC 740 1 mile east of Albemarle city limits, east for 5.75 miles to Pee Dee River.
Wilkes—	Widening and resurfacing on NC 268 from Roaring River to Ronda, 4.1 miles.
Yadkin—	Widening and resurfacing on US 601 and NC 67, to fit new curb and gutter in Yadkinville, and Boonville.
Ashe—	Widening on NC 88, from project 8.17127 to junction US 221 in Jefferson.
Yadkin—	Widening and resurfacing on US 601 from Yadkinville to Boonville, 8.0 miles.
Cleveland—	Widening and resurfacing on NC 26 from Double Shoals Road to Polkville, 3 miles.
Gaston—	Widening and resurfacing on NC 274 from South city limits of Gastonia to Robinwood, 2.5 miles.
Catawba—	Widening and resurfacing on NC 10, 6.7 miles from Newton city limits west to Blackburn School.
Cleveland—	Installation of left turn lanes at NC 180 and 74 intersection on Shelby bypass, concrete curbing.
Haywood—	Installation of two 66-inch drainage pipes under NC 209 at its junction with secondary road 1501.
Graham—	Revision in drainage system under old US 129 and adjacent to new US 129 in Robbinsville.
Haywood—	Additional drainage pipes on NC 284 from North Carolina-Tennessee line to Mt. Sterling Gap, 7 miles; also stone stabilzation.
Cherokee—	Resurfacing on US 19 from Andrews to a point 1.35 miles east.
Macon—	Stabilizing embankment on US 23 and 441 for 0.5 mile south of Jackson-Macon County line.
Haywood—	Replacing bridge on US 276 with box culvert.
Haywood—	Revisions in alignment and widening on NC 209 from secondary road 1519, northward 1 mile.
Polk—	Repairing sub-structure US 176 of Southern Railroad bridge in Saluda.

URBAN CONSTRUCTION FUNDS—$300,000

City-County	Description
Beaufort-Carteret—	Rosurfacing Turner Street from Ann Street, north to end of curb and gutter section. Ann Street east to the cementery and drainage work on Belair & Ann Streets.
Greenville-Pitt—	Widening, curb & gutter, base course & surfacing on 10th Street.
Fayetteville-Cumberland—	Bridge on Person Street in Fayetteville across Blount's Creek.
Chapel Hill-Orange—	For use on future project for bypass around north side of Chapel Hill.
Greensboro-Guilford—	Surfacing US 421 to Greenboro city limits.

Greensboro-Guilford—	Surfacing from Collier Drive to West Market Street.
Greensboro-Guilford—	Surfacing on Groometown Road from US 29A & 70A to Freeman Mill Road.
Greensboro-Guilford—	Channelization of Lee Street & signal installations at Glenwood.
Greensboro-Guilford—	Surfacing from US 29A & 70A to Freeman Mill Road.
High Point-Guilford—	Plant mix resurfacing on English Street from Main Street to NC 68, 3.07 miles.
Sanford-Lee—	Correction of drainage condition on Woodland Avenue at intersection with US 421.
Southern Pines-Moore—	Correction of drainage condition on South West Broad Street.
Raeford-Hoke—	Installation of 60-inch pipe across NC 211.
Hamlet-Richmond—	Curb and gutter construction on west side of NC 77 from US 74 to the north city limits of Hamlet.
East Spencer-Rowan—	Improvement of Long Street, from a point just east of Spencer, southwestward through East Spencer, to Salisbury. Widening and resurfacing, 3.6 miles.
Davidson-Mecklenburg—	Additional funds for completion of widening and resurfacing NC 73 from NC 115 east to city limits in Davidson, 0.6 mile.

PLANT MIX RESURFACING—$1,500,000

County	Description
Hertford—	Widen US 13 to 24 feet and resurface with 3 inches of asphalt from Ahoskie to Winton, 9 miles.
Beaufort—	Resurface 22 foot pavement on NC 33 with 3 inches of asphalt from a point 4.8 miles southeast of US 17 to Cox's Crossroads, 9.2 miles.
Stanly—	Resurface NC 27-NC 740 on Albemarle bypass with 3 inches of asphalt, 5.0 miles.
Cabarrus—	Widen US 29 to 24 feet and resurface with 3 inches of asphalt from a point ½ mile south of Rowan County line southward for 4.1 miles.
Anson—	Resurface 24 foot pavement with 3 inches of asphalt from US 74 in Wadesboro to Morven, 7.4 miles.
Rutherford—	Resurface 24 foot pavement with 4 inches of asphalt from US 74 north to McDowell County line, 13.0 miles.
McDowell—	Widen US 221 to 24 feet and resurface with 4 inches of asphalt pavement from Servier Road to Linville Falls, 12.8 miles.

Beaufort-Morehead Bridge Discussed At Hearing

Plans for the construction of a new bridge between Beaufort and Morehead City were unveiled at a recent public hearing in Beaufort.

Under the proposal, a new 2,700 foot bridge would be constructed parallel to and just north of the Beaufort-Morehead City railroad tracks. Total construction including bridge and approaches would be approximately 2 miles in length. The bridge would feature a 28-foot roadway with provisions for two lanes of traffic and 3 foot sidewalks would be built on each side of the roadway.

The bridge would have a horizontal clearance of 90 feet at the draw and a vertical clearance of 25 feet when the bridge is in a closed position.

Entrance on the Morehead City side would be from Arendall Street and from Cedar Street on the Beaufort side. After completion of the new facility, the existing bridge would be dismantled.

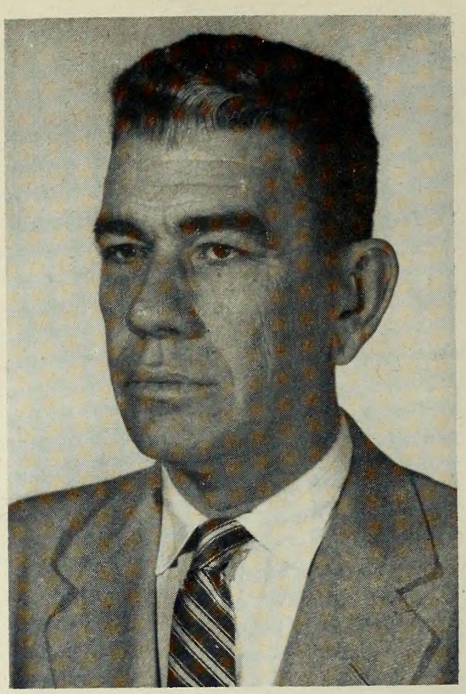
The bridge design is flexible to permit later installation of an ocean-going draw span for deep draft vessels, should the port development require it.

A. H. McDaniel Joins Highway Legal Staff

Another addition to the Highway Department's legal staff is Andrew H. McDaniel, who replaces Glenn L. Hooper, Jr., recently named as assistant attorney general.

McDaniel, a bachelor, is native of Forest City. He received a B. S. degree in business administration from the University of North Carolina and later recieved his law degree there.

Following his graduation, he worked as research assistant for Supreme Court Justice R. Hunt Parker and prior to joining the Highway Department he was associated with the law firm of Holding, Harris, Poe and Cheshire in Raleigh.



J. E. THOMPSON

Succeeds Proudley

J. Eugene Thompson, Jr., has been named Materials and Testing Engineer replacing C. E. Proudley, who retired recently.

Thompson, a native of Hamlet, holds a B.S. and M.S. degree from State College in chemical engineering. He joined the Highway Department in 1935 as a junior inspector and was a Materials Engineer IV from 1955 until his appointment.

The new Materials and Tests Engineer is a member of the Raleigh Engineers Club and the N. C. Society of Engineers. He is a member of the Official Board of Edenton Street Methodist Church where he teaches a senior Sunday School class.

He is married to the former Rosa Elizabeth Griffin and they have two sons.

FOR SALE

The State Records center, located at the corner of West Lane and North McDowell Streets, has for sale a number of metal, letter-size filing drawers for $2.00 each. Interested persons may contact Mrs. Memory F. Blackwelder.



Division, Assistant Division Engineers Hold Three-Day Meeting With Director, Commissioners

The Commission room was crowded and so was the agenda as Division and Assistant Division engineers met in Raleigh during December for a three-day conference with Department heads, the Director and his staff and the seven member Commission.

Purpose of the meeting was to review and iron out problems, go over in detail standard policies of the Commission, new legislation affecting highway work and to get recommendations of Division Engineers on new projects involving an estimated $10,300,000 improvement program on Secondary and Primary roads in both rural and urban areas.

In advance of the meetings, held on December 8, 9 and 10, Department heads in Raleigh were asked to detail in written form the responsibilities of their various Departments and the material, collected in a well-filled notebook, keyed the discussions. Director W. F. Babcock indicated the material was the first step in the direction of preparing a complete manual of operation setting forth all policies and procedures of the Commission and Highway Department. When completed, the manual will be available to all supervisory personnel for their information and reference when problems such as drainage, enroachments, signing, etc., arise in the field.

"All of us here feel that an organization as large as the Highway Department should have such a manual to assist personnel in the field, especially in dealing with the general public in road matters," said Babcock.

He said the manual would enable supervisory employees to deal with common problems in a more uniform manner all over the State and assist them in referring matters to the right department.

Among the many summaries presented to Division heads were the general responsibilities delegated to the seven member Commission by the statutes, an explanation of procedures in municipal thoroughfare planning, federal aid apportionments under the slightly curtailed program of federal highway building, schedules on contract lettings for both the Interstate and Primary program for the calendar years 1960-1961, general procedures in public hearings and other public relations matters, a discussion on compensatory time and retirement, financial matters, traffic controls and Secondary Road procedures and policies.

Practically all Division and Assistant Division engineers chimed in on the discussion offering suggestions and outlining problems which had been encountered in the various Divisions.

Only one Division Engineer was missing from the group. Bill Spruill of Division One missed the session because of an attack of influenza.

Following the three-day meeting Division personnel were entertained at a College Inn steak dinner. Several spontaneous after dinner speakers were called on for remarks by Chairman Broughton, and many used their time in a rousing send off to Secondary Roads Officer Harold Makepeace who moved across Capitol Square to the Governor's office as private secretary succeeding Ed Rankin.

Advertisements Out For 1960 Highway Maps

Advertisements have gone out to prospective bidders for publication of the 1960 State Highway map. A five-color pictorial edition and a black and white map is scheduled for delivery around March 1.

The map is going to contract earlier in a further effort to stimulate tourist travel in North Carolina by out-of-State motorists. The contract calls for delivery of 300,000 color maps for free distribution, an increase of 200,000 over last year's edition. Reason for the increase is that the supply of 1959 maps was exhausted in an unprecedented call for the attractive color maps by the general public.

The 1960 map will carry full panel pictures on both front and back covers while some sixteen scenic spots and points of interest around the State will be carried on the inside.

The map has been updated to include all road improvements which will be open to the traveling public during 1960 and the several sections of Interstate Highways will be shown in green to call attention of travelers to the four-laned, controlled access facilities.



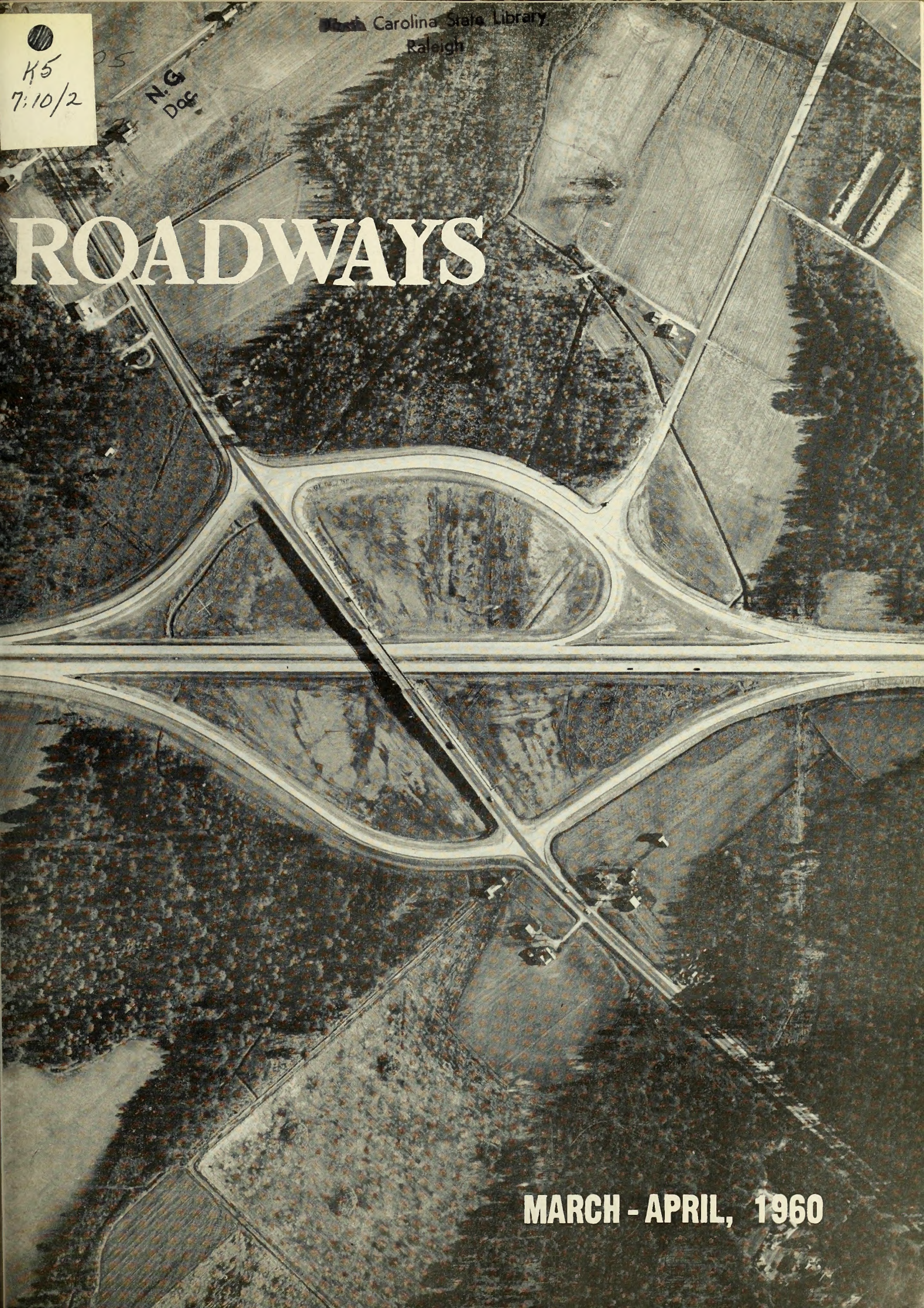
This portion of I-85, located in Vance and Warren Counties, will be paved and under traffic during 1960. Paving contract on the 18-mile section of I-85 was awarded to Nello L. Teer Co., of Durham, at a cost of about $3,828,000.

Form 3547
ROADWAYS
State Highway Commission
Raleigh, N. C.

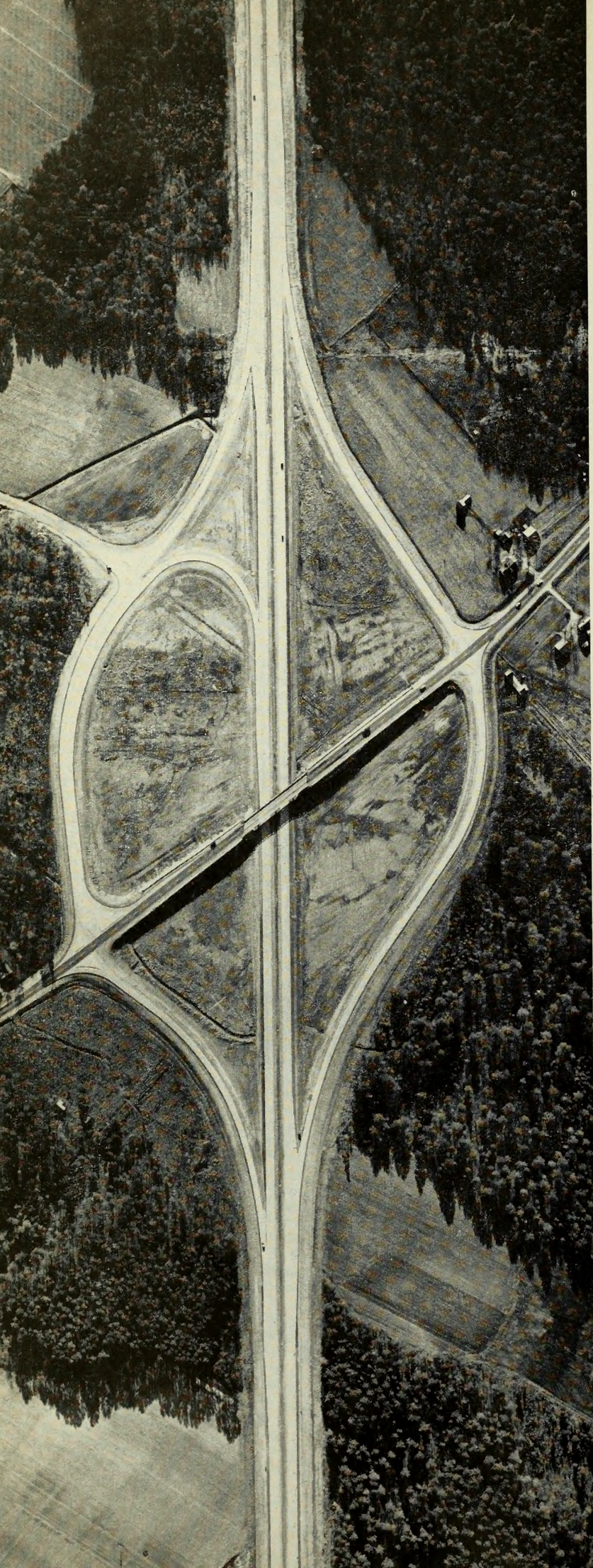
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ROADWAYS



MARCH - APRIL, 1960



ROADWAYS MAGAZINE

A Publication For
N. C. Highway Employees

Volume X
Number 2

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Luther H. Hodges.....Governor
J. Melville Broughton, Jr.....Chairman
Robert Bunnelle . . . . James W. Mason
Fletcher H. Gregory, Jr. . . . R. T. Morris
Ralph L. Howland . . . . . J. Lee White
W. F. Babcock.....Director of Highways

March-April

Sam Beard.....Editor
Jeanne Hawthorne.....Assoc. Editor

EDITOR'S NOTE

This issue of ROADWAYS was delayed intentionally in order that we might publish an account of the record snowfall which hit North Carolina in March.

See pages 4 to 7 for pictures and story; page 3 for a personal letter to employees from Governor Hodges; and the inside back cover for Director Babcock's letter to employees.

This issue is unusually large because we are publishing several interesting and important papers presented at the Second Annual Highway Conference held in Raleigh February 2-4.

THE COVERS

The front and back covers feature aerial photographs of an interchange on Interstate 95, between Smithfield and Benson. This is a good example of the fine aerial photography being done by the new Photogrammetry Department.

Payroll Deductions Explained

Changes in the method of paying increments, a survey of field reaction to the bi-weekly plan, and a meeting between the Highway administration and officers of the Highway Employees Association highlighted last month's news on payroll activities.

The survey, requested by Director Babcock, covered practically all Divisions in the field, as well as the Equipment Department which shifted to the bi-weekly payroll plan earlier than other employees.

Division Engineers, along with the Equipment Department, reported that increment changes met broad approval and that rank and file employees are becoming better adjusted to the bi-weekly payroll.

A bi-weekly or similar payroll plan, which calls for payment to be made after a work period is completed, is now in effect in over 80% of the nation's businesses and throughout the federal government.

The meeting with employee Association officers was called by Director Babcock after issuance of the February Employee News, and was for the purpose of determining the Association's position on the new payroll procedures.

In an exchange of letters following the meeting. Association officers reported they understood the many reasons for the change-over and stated verbally that the new plan should gain more general support in future months, especially after three full bi-weekly checks are delivered in one month and after deductions for the "payroll adjustment check" have ended.

Attending the meeting for the administration were Highway Director W. F. Babcock, Chief Engineer C. W. Lee, Assistant Chief Engineer Ivan Hardesty, Controller Ervin Dixon, Personnel Officer Sam Badgett and Public Relations Officer Sam Beard. Representing the Employees Association were J. A. Abernethy, President; Layton Gunter, Vice President; and Otis Banks, Secretary.

Babcock said the wording of the Association News might easily have given the impression that the Association was opposed to the pay plan and asked if the statement indicated a reversal of the Association's position. In a written reply, Association officers said, "If through a misunderstanding or an unfortunate choice of words, the impression was created that the Association is fighting the payroll plan, this is a regrettable circumstance and we assure you this is not the case."

Both the administration and the Association pledged cooperation in any future payroll matters and in any future improvements which might be made.

Controller Ervin Dixon pointed out that increased deductions above what had previously been deducted, for State withholding tax, social security and insurance premiums have had perhaps a greater effect on "take home pay" than most people had expected. In a memorandum, he prepared charts showing the **annual** effect of these three increased deductions. Dixon said the figures represented actual increases over previous deductions and would have the same annual effect with any pay plan (weekly, bi-weekly or monthly).

The chart reproduced below shows **additional** deductions for social security, State withholding tax and increased insurance premiums for several typical salaries and for 1, 2, 3, or 4 dependents (exemptions).

Remember, the figures below are in addition to (increases) to all deductions made on the old monthly payroll system.

Dixon also said that the figures shown in the chart below do not include necessary deductions for the "payroll adjustment check" which many employees voluntarily accepted. The "payroll adjustment check" was offered by the Highway Administration as a means of assisting employees in the change-over to the new bi-weekly payroll plan.

The advance payment, equal to two-weeks pay, was offered by the administration when the first bi-weekly checks were issued. For those who accepted these checks, it was agreed that the amount of this advance payment would be repaid in 16 equal bi-weekly installments, ending with the close of the fiscal year. The average deduction, among all 8,000 permanent employees is approximately $10.00 for each pay period.

Controller Dixon also prepared a chart showing the further breakdown of **additional** payroll deductions because of increased Social Security, State Withholding tax and higher insurance premiums, showing the annual additional deductions for each of these items for 1, 2, 3, and 4 exemptions (next page).

INCREASE IN ANNUAL PAYROLL DEDUCTIONS DUE TO

INCREASE IN GROUP INSURANCE PREMIUMS (11-1-59)

INCREASE IN FEDERAL SOCIAL SECURITY TAXES (1-1-60)

STATE INCOME TAX WITHHOLDING (1-1-60)

Annual Salary Rate	Combined Increased Annual Deduction for Exemption of			
	1	2	3	4
$2,892.00	$ 79.50	$ 75.90	$ 66.90	$ 57.90
3,360.00	97.92	93.60	84.48	75.60
3,876.00	119.10	110.46	101.34	92.46
4,152.00	130.44	119.64	110.52	101.64
4,596.00	151.38	137.70	127.02	118.14
6,096.00	222.60	202.68	190.68	178.68
7,680.00	316.80	288.84	273.84	258.84
8,640.00	374.40	340.68	322.68	306.84
9,612.00	432.00	398.28	380.28	362.28

INCREASE IN ANNUAL PAYROLL DEDUCTIONS DUE TO

INCREASE IN GROUP INSURANCE PREMIUMS (11-1-59)
INCREASE IN FEDERAL SOCIAL SECURITY TAXES (1-1-60)
STATE INCOME TAX WITHHOLDING (1-1-60)

Annual Salary Rate	Exemptions	Additional Group Insurance Deduction	Additional Social Security Tax Deduction	State Income Tax Witholding	Total Increased Annual Deduction
$2,892.00	1	$ 16.44	$ 14.46	$ 48.60	$ 79.50
	2	42.84	14.46	18.60	75.90
	3	42.84	14.46	9.60	66.90
	4	42.84	14.46	.60	57.90
3,360.00	1	18.00	16.80	63.12	97.92
	2	44.40	16.80	32.40	93.60
	3	44.40	16.80	23.28	84.48
	4	44.40	16.80	14.40	75.60
3,876.00	1	19.32	19.38	80.40	119.10
	2	45.72	19.38	45.36	110.46
	3	45.72	19.38	36.24	101.34
	4	45.72	19.38	27.36	92.46
4,152.00	1	20.64	20.76	89.04	130.44
	2	47.04	20.76	51.84	119.64
	3	47.04	20.76	42.72	110.52
	4	47.04	20.76	33.84	101.64
4,596.00	1	22.08	22.98	106.32	151.38
	2	48.36	22.98	66.36	137.70
	3	48.36	22.98	55.68	127.02
	4	48.36	22.98	46.80	118.14
6,096.00	1	27.60	24.00	171.00	222.60
	2	53.88	24.00	124.80	202.68
	3	53.88	24.00	112.80	190.68
	4	53.88	24.00	100.80	178.68
7,680.00	1	27.60	24.00	265.20	316.80
	2	53.88	24.00	210.96	288.84
	3	53.88	24.00	195.96	273.84
	4	53.88	24.00	180.96	258.84
8,640.00	1	27.60	24.00	322.80	374.40
	2	53.88	24.00	262.80	340.68
	3	53.88	24.00	244.80	322.68
	4	53.88	24.00	228.96	306.84
9,612.00	1	27.60	24.00	380.40	432.00
	2	53.88	24.00	320.40	398.28
	3	53.88	24.00	302.40	380.28
	4	53.88	24.00	284.40	362.28

Again the figures shown above are in addition to standard deductions which were required by law under the old monthly pay plan.

Dixon said most employees he had talked with in the field and in Raleigh understood the effect that the three increased deductions would have on "take home pay", but he said there may be some employees who did not attend the meetings and who, perhaps, do not realize the significant effect which these additional deductions have on "take home pay".

Dixon said a few employees had questioned him about why their W-2 Statements, issued recently, showed a total gross taxable income for 1959 which is less than their annual salary. This, he said, is due to the fact that earnings for the last two weeks of 1959 were not actually **paid** to employees until after the first of the new year (1-15-60). The W-2 form shows only **actual payments** to employees. He also said that the "payroll adjustment check" did not appear as earnings, since the amount of the advance is being deducted from current payroll checks.

"Actually, employees will pay less federal income tax on April 15 because of the switchover to the bi-weekly pay plan — gross taxable earnings were shown as less," said Dixon.

Changes in the method of paying increments to employees were worked out jointly by the Highway Administration and the State Personnel Department. Field personnel were notified of the change in a February 12 memorandum to Division Engineers and Department Heads from Personnel Officer Sam Badgett.

In his letter, Badgett pointed out that the changes in effective dates of increments were made so that there would be no delay in paying these increments to employees.

Badgett said, "Employees now on the payroll, whose anniversary dates are on the first day of the calendar month are eligible to receive their increments on the first day of that month if the day is also the first day of a pay period."

"In most instances, the anniversary date and the beginning of the payroll date will not be the same date. Therefore, most employees will begin earning increments on the first day of the pay period **preceding** the anniversary date.

"Thus, all employees will earn their increment either on the **exact date due** or **before** that date," said Badgett. This change has already been put into effect and increments submitted for February 13 were moved back and given an effective date of January 30, 1960. Badgett said the Personnel and Finance Departments are now working to adjust increments which came due in the months of December 1959 and January 1960. As soon as these increments are worked out, employees affected will receive this additional money. Badgett said instructions for submitting increment information has been relayed to all Divisions and Departments.

Controller Dixon said several employees had asked him how to compute their daily pay. Under the bi-weekly payroll plan, all permanent employees are now paid on a daily rate of pay which is based on the employee's annual salary in accordance with Personnel Department classification and salary ranges.

Employees can use the following steps to determine daily rate of pay. These steps are outlined below for an employee whose annual salary is $4,212.

Normally, there are 261 working days during the fiscal year for employees who work a five day week. Since this is a leap year, there are 262 working days in this fiscal year.

Divide annual salary by the number of working days as follows:

$4,212 ÷ 262 scheduled work days=$16.076

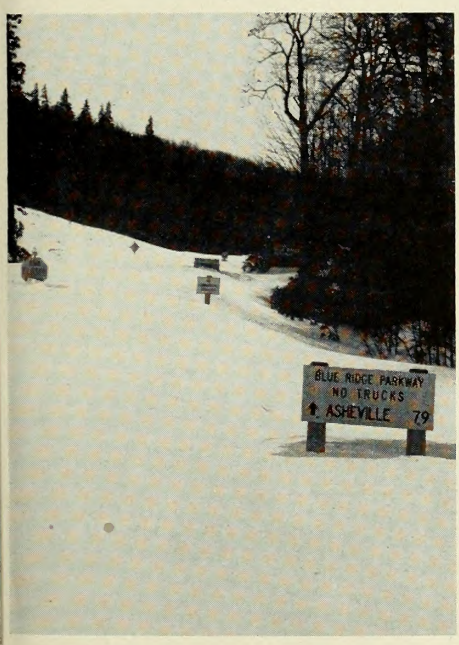
The daily rate of pay for this employee would be $16.076.

To determine the total gross pay for any bi-weekly pay period (5-day work week), the daily rate of pay should be multiplied by 10.

$16.076 X 10 working days=$160.76.

In a tour, which has taken them throughout the State, Controller Dixon and Personnel Officer Badgett, together with representatives of their Departments, have explained the details of the bi-weekly payroll to some 1,500-2,000 supervisory employees.

Both expressed a willingness to answer any questions which might arise and urged Highway employees to direct any further questions to their supervisors in order that supervisory personnel will be acquainted with such questions and can, if necessary, direct them to the Finance Department or Personnel Department in Raleigh.



NOT A CREATURE WAS STIRRING—The Blue Ridge Parkway lay undisturbed beneath huge drifts of snow.

Personal Letter From Governor Hodges

Dear Highway Employees:

I would like the opportunity through ROADWAYS magazine, of addressing a personal note of appreciation to all of you who worked either directly or indirectly in recent snow removal from our roads.

On my tour of several counties, I saw and talked with many of you and had an opportunity to see first hand the difficulties under which you were working. In my estimation, no individuals or groups worked harder and deserve more credit, especially the machine operators.

Highway Commissioner Ralph Howland and I conferred several times and asked your highway officials to spare no effort or expense in getting transportation facilities open as quickly as possible. The way in which you pitched in from all highway divisions sending both men and equipment to the snow bound area was magnificent.

Though the worst areas were in the west, I am well aware of the problems faced in the Piedmont and the east. Here the same spirit of teamwork and determination were displayed.

Behind the news reporter's words "roads are open" lay a tremendous amount of effort under conditions which were hard to realize unless you saw it as I did.

As your Governor, I know I can speak for all North Carolinians in saying that you have reflected great credit upon yourselves and the Highway Commission as well as the great reputation for excellent public service which has been yours for many years.

A great many persons have commented to me about the work you have done and I shall continue to agree with them and express my pleasure at being associated with you in government service.

Cordially yours,
s/ Luther H. Hodges
Governor



DEEPER THAN YOU THINK—Chief Engineer Cam Lee and Maintenance Foreman Frank McCracken, en route to the Winter Olympics? Not at all, this shot is over the Mt. Jefferson Road in Ashe County.

Suddenly This Winter . . . .

A lady walked into the Boone Highway District Office recently to remark, "this is the prettiest snowfall in years."

Her remark brought a stare from highway employees that was just as icy as the pavement outside. District Engineer Tom Winkler and his assistants could find little pretty about a record-breaking spell of bad weather which had dumped up to 72 inches of snow on Ashe, Alleghany, Avery and Watauga and kept forces working around the clock in an effort to keep roads open.

The most discouraging part of the weather situation was that the storms were spaced far enough apart to allow almost enough time to clear roads—then, they were belted again.

Eleventh Division Engineer J. H. Councill of North Wilkesboro remarked, "it's just like a cocked pistol. You don't know when or where it will strike and, when it does, we have to be on top of it."

On top of the situation they were, too—not only in Division Eleven, but in every section of the State where snows came. In a memorandum to all Division highway personnel, Chairman J. Melville Broughton said, "highway employees have justly earned the appreciation of all North Carolina and we wish to commend you for proving your loyalty and devotion to a task that has been most difficult but most necessary."

Highway Director Babcock, who ordered a tremendous supply of additional equipment into snow-stricken areas, said, "we have never been more proud of highway employees than we are right now."

Normally, the department has 63 pieces of snow removal equipment in the four northwestern counties hardest hit. A final count showed some 210 pieces in operation in Ashe, Alleghany, Avery and Watauga. Some private equipment was rented from contractors and there was at least one instance where a contractor sent equipment to clear roads without even contacting engineers in advance.

Commissioner Ralph Howland of Elkin spent a tremendous amount of time in working with forces in the northwest and in contacting other agencies such as the Army, National Guard, Red Cross, cities and counties. Mr. Howland added his word of praise of the work, describing employee efforts as "truly magnificent".

It was Commissioner Howland who alerted Governor Hodges and Director Babcock with requests for more equipment and this contact resulted in National Guard action, along with the Army and Red Cross. Commissioner Howland kept on constant go.

The measure of any job is the results it produces and the fact that Primary and paved Secondary Roads were opened to at least one-way traffic in a few hours in Divisions eleven, thirteen and fourteen is, in itself, the best tribute.

There were innumerable cases where highway equipment led the way for ambulances to pick up the sick and deliver them to nearby hospitals. More than half a dozen expectant mothers were brought in to proper medical care and "in time" and Maintenance Foreman Paul Higgins in Sparta and J. H. Taylor of Ashe will have many a story to relate along with the operators who worked with them to free snowbound citizens.

District Engineer H. E. Koontz of Elkin can join the group of new "old timers" in telling of the big '60 storms. At one time, Koontz reported that the Elkin football coach Boyce Grissom was on a motor grader and had been for two days—just helping out.

The Elkin Wildlife Society got together a hundred dollars to buy cracked corn. Some eight hundred pounds of it was delivered to Koontz and it was spread along cleared roads for hungry birds. Commissioner Howland reported that game birds were dying by the thousands throughout the northwest.

State Equipment Engineer George Brinkley and State Maintenance Engineer B. W. Davis set up headquarters at the Eleventh Division office in North Wilkesboro and Chief Engineer Cam Lee joined them to set up a central motor pool for distributing incoming heavy equipment to nearby counties where it was needed most. Brinkley said the incoming convoys of equipment, sent in by Assistant Chief Engineer Sig Hardesty, were the most comforting sight he'd ever seen.

Men moved in with the equipment. At one time, the lobby of the Hotel Wilkes looked like a convention of employees and they were from points as far away as Wilmington. It would be



OVER THE TOP—Seen from the right of way line, another mountain of snow is dumped over previous mounds to tumble down into a farmer's front yard. Damage to roadside fences is expected to be heavy.

impossible to name them all, agreed Turner Hight of Fayetteville, who brought in a convoy.

Machine Operator H. G. Rudd of Greensboro, operating a front-end loader in Ashe County, said he got there quickly but he doubted that his return would be as easy. "I may never get home," joked Rudd who was bundled up like a Byrd Expedition explorer.

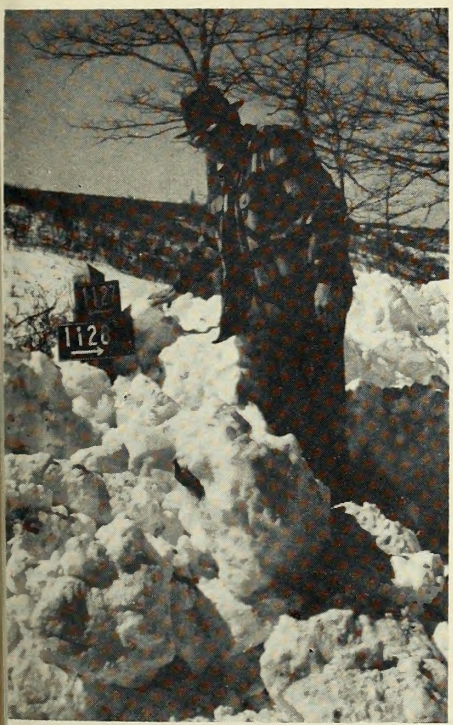
Assistant Chief Engineer Hardesty used a good bit of psychology in getting equipment from various Divisions. He and Buck Upton would call an eastern or Piedmont Division Engineer to ask how road conditions were. Pridefully, the engineer would report all his roads wide open to traffic. "Good," said Hardesty, "then you will be able to send quite a bit of equipment."

"Yes sir," was the only reply he got, or could get.

The fact that two-way radio installation has been all but completed throughout the State was of tremendous help. Hourly reports on road conditions came in from highway forces throughout the west and Piedmont and requests for additional equipment could be made easily. There was one problem, however. Traffic was so heavy that Chief Engineer Lee asked all Divisions to transmit only emergency information. Cleared of routine matters, the radio channels were restored to storm messages only.



MUSH ! ! ! Up the mountain in Alleghany County to dig out a lady who was short on coal. Behind this dozer lies another two feet of snow, which was cleared on a second pass.



SIGNS OF WINTER — Maintenance Foreman Frank McCracken uncovers intersection signs at two Watauga County roads. Both were opened to one-way traffic with chains.

District Engineer Tom Winkler of Boone said Saturdays and Sundays were pretty good radio days, but even then, there was a few minutes delay on some messages.

Winkler, who had just recovered from an automobile accident in which he suffered a broken leg, slipped on the ice and sprained his ankle severely. Maintenance Engineer Paul Dupre was called in to help, but Winkler remained at his post in the district office. He said Dupre was of tremendous help to him.

From the Boone office, Mr. Lee and Public Relations Officer Sam Beard left with Maintenance Foreman Frank McCracken to tour the worst areas. Pictures in this article are the result of the trip.

Lee also joined Governor Hodges in a five-county helicopter tour to inspect the road situation. Lee said there were a good many homes back in coves and away from State highways where there was no sign of life, but a closer inspection revealed that the houses had been deserted.

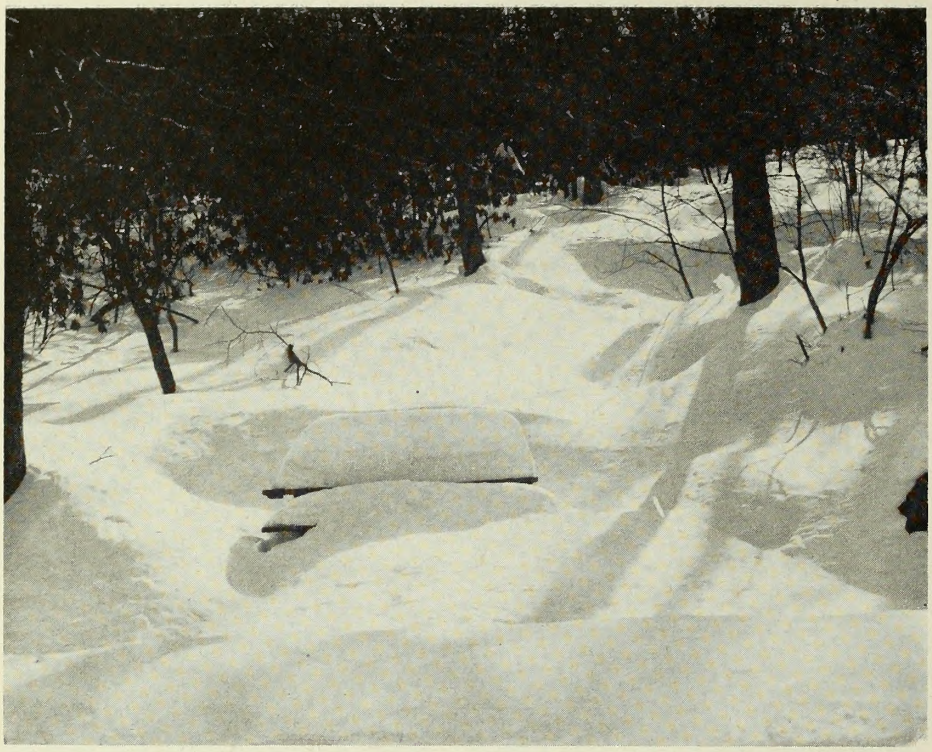
Hundreds of people were brought relief shipments of food and fuel over cleared roads or by helicopter. Storm casualties were held to a bare minimum —a tribute to the ability of all State, Federal and private agencies to mobilize and to cooperate.

There were any number of instances where results would have been tragic if emergency supplies had not gotten through. There were also the usual number of stories on the lighter side.

One lady said her coal supply was low and she just hated to have to go into that huge woodpile behind the house. "It's so messy," she said.

Another fellow who was reached by highway forces joked, "you know, it's been a hard winter — so cold. If this snowfall hadn't come and we got extra food, we might have starved to death."

Highway Director W. F. Babcock said it will be impossible to determine road



ANYONE FOR SNOW CREAM? The table is set at this roadside park near the Blue Ridge Parkway in Avery County.

damage until all roads are clear and dry, but damage is expected to be heavy, perhaps in the millions. He appealed to the general public living on unpaved roads to be indulgent with the Highway Department in its effort to spread stone. Babcock said it would be useless to distribute stone generally until drier weather assured that the stone wouldn't disappear the day after it was spread.

With Spring already here (on the calendar), highway forces can look back on an around-the-clock job well done and with a hope that the weather catches up with the calendar and brings little, additional damage.

About The Snow

THE ASHEVILLE CITIZEN—"Emergency recruits from throughout the State joined snow-weary highway crews Thursday in a Herculean effort to dig Western North Carolina out of its stifling white blanket.

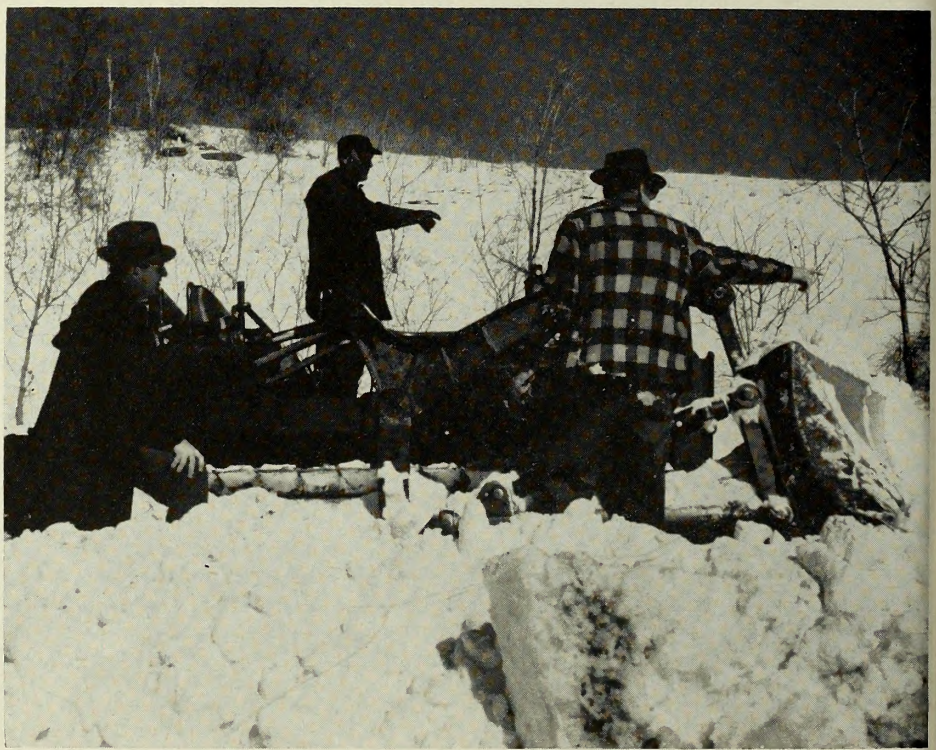
"Additional men and machines moved into the 21-county snow-bound area in the wake of the new storm that dumped about a foot of snow on the region and brought a total accumulation of 38 inches in many sections.

"And even more outside help was on the way to further augment the State Highway Department's regular army of admirable snowmen reeling from the weariness of some 30,000 hours of overtime work since the explosion last week of the worst February-March snow assault in 35 years or more.

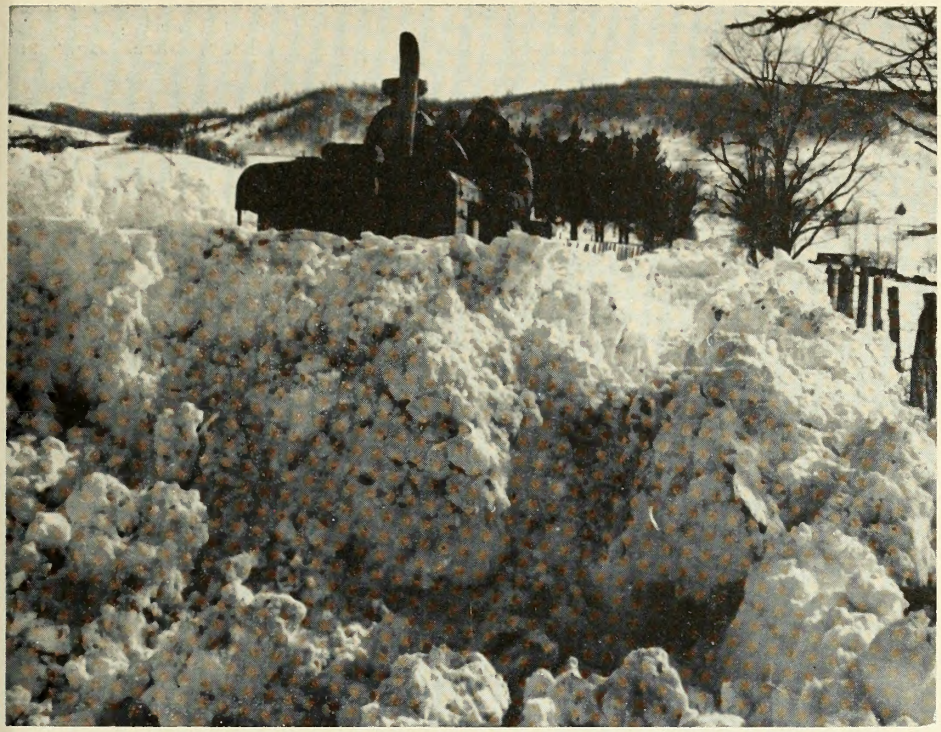
"A gigantic task force from the eastern part of the State pushed toward the snow-beseiged Watauga-Avery-Alleghany area where highway crews battled snow difts as much as 35 feet deep."

From the WATAUGA DEMOCRAT, Boone: "The Highway Department has done a magnificent job of keeping the main highways open, has imported added machinery from all over the State, the paved secondary roads are open, and all others are being opened just as fast as humanly possible. They have worked faithfully and in a spirit of rare dedication to the public welfare."

Mrs. Ed Anderson, editor of THE SKYLAND POST, West Jefferson, wrote: "Members of the highway forces in the county have worked day and night and have been praised by those in close touch with the situation. The paper quoted School Superintendent A. B. Hurt: 'They have really done a fine job and I know we can count on them to continue to do so.' "



OUT AHEAD—TROUBLE—Pausing to determine the best approach to a new drift, Chief Engineer Lee and Maintenance Foreman McCracken confer with dozer operator Henry Randall. Several dogs jumped into the path of dozers and at least three were rescued by operators.



LOOK OUT AHEAD—Machine Operator H. G. Rudd of Greensboro (Division 7) works an Ashe County secondary road with a dozer.



BACK AGAIN TO MAKE IT WIDER—Motor Grader Operator H. C. Carswell makes another pass at US 221 near Pineola. He hoped it was the last, but more snow came.

THE OBSERVER - NEWS - ENTERPRISE, Newton, wrote: "The State Highway crews are to be commended on the fine job they did. Some folks do not realize that the first thing these crews must do is to clear and keep open our primary highway system. Then comes the work on the secondary roads. We can understand the feeling of the people who live on secondary roads and their anxiety concerning getting their roads clean. But we also realize that the state is in the same condition as the City of Newton, that in the South no state is really prepared to cope with a heavy snow. And considering the problem, we feel that the State Highway deserves credit and our thanks for their efforts."

WINSTON-SALEM JOURNAL, letter to the editor from C. O. Fulk: "From time to time, I have noticed that the State Highway Department gets criticism one way or another. I am wondering how many citizens have called them to give them a word of thanks for removing the snow from our highways? I was never so amazed as I was when I started to work at 5:30 a.m., on Thursday, March 10, to see that the highway I travel was cleared of snow in such a short time. There must have been a number of children that did not see Daddy, or wives that did not see husbands the previous night. They must have worked all night to get such a tremendous job done in such a few hours.

"Gentlemen of the Highway Department, my hat is off to all of you for making my journey from home to my work much easier and safer."

O. Ellis Clark, chairman of the Bladen County Board of Commissioners wrote: "The Board of Bladen County Commissioners at their meeting held on March 14, wish to convey their thoughts to you for the splendid work in removing the recent snow from our highways in the county. We feel that you (B. T. Bordeaux, Maintenance Supervisor) and all of your crew are to be commended for such fine work in clearing our highways of snow so quickly."

The Birth Of A Highway

Papers Presented At Highway Conference – Feb. 2-4, 1960

Keynote Address

By J. Melville Broughton, Jr.

Chairman, State Highway Commission

This Second Annual State Highway Conference offers to all of us one of the most unusual opportunities for learning and understanding that I can possibly imagine. On behalf of our entire Commission, may I take this opportunity to welcome each of you to this three-day Conference. When approached on the planning of such a session, our Commission was eager to join in its co-sponsorship. The Conference affords us the advantage of face to face communications—a sharing of mutual problems—and a search for common solutions. It is our hope that the end result will be reflected in a higher type of road service for our own citizens and our millions of visitors.

It shall be my purpose to discuss with you the role which the Highway Commission plays in the development of improvement projects on our various highway systems and how we have gone about our work in the past several months.

In one sense, the task of the Highway Commission in a single project or in a series of projects can be stated in one sentence. If the project is approved by the Commission, it is built; but if it fails to meet the approval of at least four of our seven Commissioners, it is dropped.

Such an over-simplification of the Commission's responsibility is, of course, not fair to the Commission nor to the scores of planners, engineers, department heads and technicians who have carefully analyzed the merits of various road project proposals before the Commission sees them.

No explanation of the Commission's role could possibly be made without first expressing our sincere appreciation to the employees of our own Highway Department, to local County and Municipal governments, to contractors, equipment representatives and to the general public for this help, understanding and tolerance as we try to hurdle the many obstacles and problems which seem inherent in our tasks of public service.

North Carolinians have reason to be proud of their highway network which has seen constant improvement over the years. Today our roads are the envy of many other States, and we have continued in a position of national leadership in road construction over the past several months.



Broughton

The current street and highway needs of our State are too great, however, to permit us even a moment of idle complacency. Within our financial ability to do it, we must continue to measure carefully the needs of each area of the State and continue also in our program of filling those needs on a fair and equitable priority system. The speakers who will follow me will go into some detail concerning dollar deficiencies, and I shall not dwell on them here except to restate the obvious. We do not have enough funds to improve or pave every road or highway within the system. Saying the same thing in a slightly different way—we must be reasonably sure that whatever funds we do have for expenditure are earmarked for projects where the extent of the need can be shown and defended.

This is, by far, the most important responsibility of our Commission and it demanded first attention when the new Commission assumed office two and one-half years ago. With the help of the administration, our engineers and local officials, the Commission adopted a broad base for measuring road needs on the Primary, Secondary and Interstate Systems. Our highway facilities can have a possibility of only two ratings under such a state-wide formula. Each road is either standard or sub-standard, adequate or inadequate.

For inadequate sections, a further formula was devised to measure the amount of public service provided by each road in an obvious attempt to improve the most useful and most inadequate roads first. Actually, then, it isn't the Commissioner or administrator or engineer who selects the project. In reality, the road picks itself by the condition it is in and by the amount of service it is or should be providing.

The Highway Commission owes its existence to—and derives its authority from—the General Statutes of North Carolina as enacted or amended by the General Assembly. Our seven Commissioners are appointed to staggered four year terms of office in such a manner that the service of some of them does not end at the same time as an administration changes. Such a method of appointment was adopted in an effort to give continuity to the Commission operation even though one Governor might leave office and another take over.

The law provides that seven Commissioners shall be appointed from various areas of the State and that they shall represent the State at large and not any special area. The Commission is specifically directed by law not to sacrifice general State-wide interest to the purely local desires of any particular area.

Time will not permit a complete review of all the many duties of the Commission, but some of the major responsibilities include approval of the organizational structure of the entire Highway Department, as well as the review and approval of the budgets of all sections of the Highway Department.

The Commission also approves budget requests to the Advisory Budget Commission and General Assembly and allocates funds for maintenance and improvement projects on the Primary, Secondary, Urban and Interstate Systems. Secondary Road plans for each of the 100 counties must bear the Commission's stamp of approval, and we must review and approve all bids for contract projects. Before any improvement project can be planned or surveyed, the Commission must first sanction it in a

public meeting. Naturally, Commissioners must regard very carefully recommendations of the engineers and administrators, but we listen also quite closely to public opinions as expressed in public hearings held throughout the State.

Looking back over the past two and one-half years, I can tell you quite frankly that the various projects which have been approved have been the ones the Commission has heard the most about in its State-wide tour of 33 public hearings which have taken us from the mountains to the ocean and from north to south across our State. From these hearings and from consultations with County and Municipal officials, we have learned what the people have long regarded as their most critical and pressing road problems. Each of these requests was turned over to our planners and engineers for study. Many were approved for construction. Others had to be rejected because of greater needs elsewhere or because of a shortage of funds. However, from the letters of appreciation which have poured into the Commission from all sides, I feel confident that the studies and hearings did turn up the most important needs and that, in the various lists of projects approved and published, the most critical needs are being filled first.

The role of the Commission in selecting projects is indeed an important one. We are all aware of the tremendous economic benefits which good highways bring to any area. Many different forms of economic, social, recreational and religious benefits accrue from modern road facilities and we are all well aware of the public clamor for improved roads in all areas.

Even though the Commission is able to provide for a much needed and much sought after highway project, the problems of building the road are far from over. Securing the necessary rights of way is both a serious and complexing problem and no problem which has faced us has been given more thoughtful consideration than this one.

Thirty years ago, the Highway Department spent less than $100,000 for the purchase of rights of way. Today that figure has grown to $12,500,000 and is still very much on the rise. The day of horsetrading with public dollars has come and gone. Our Commission has completely revised its right of way policies in a renewed effort to be fair and consistent with property owners throughout the State but, at the same time, to be ever vigilant in protecting public funds from those who would gouge or reap huge profits at public expense.

The new policy calls for better notification to property owners when highway plans might affect them, and qualified—but disinterested—appraisers are being employed and directed to go to any lengths required to determine a fair damage to property from highway construction. Once determined, it is this offer which is made to the property owner, not a lower figure to allow for bargaining and not a higher figure simply to appease.

Here I would like to point out the need for a new awareness on the part of our courts and juries when right of way cases reach litigation. The Highway Fund is not geared to the theory—"Let's pay this fellow a little more than his property is worth because the State is rich and can afford it." We are not rich —we cannot afford it and court settlements which run two or three times the appraised damage reflect directly on the level of general maintenance of other roads or mean that another improvement project to benefit the public cannot be built.

To illustrate my point, a man bought a piece of property in North Carolina twenty-five years ago for $1,500. Twenty years later, the Highway Department paid him $3,500 for a small corner of his land for a highway improvement. Five years after that, he refused $65,000 for a small part of the residue bordering the new highway. Yes, highways have been known to improve the value of land and buildings.

We are hopeful that the extra care being given to a determination of damages, if any, will bring about a more realistic right of way cost and a better understanding between the Highway Department and the public. It is one of our most difficult areas and one which will demand constant close attention of the Commission.

As a general rule of thumb, it might be said that the Highway Commission is a policy-making body. It does not deal with day to day administrative or engineering matters. We have a most efficient and capable Highway Department composed of men and women specifically trained to handle this work in a most competent matter.

There are, however, certain matters of general administration which are brought before the Commission. One of these matters is the organizational structure of the Highway Department. We have been most anxious that an organizational manual be prepared which set forth an adequate complement of personnel in each of the Department activities, and that this complement be filled by persons properly qualified and properly classified. In most areas of work, this has been completed and approved by our Commission. Within this organizational structure, the various positions are filled by the administration and not by the Commission. However, increases in the complement of personnel or decreases in that complement must be justified before the Commission.

Along with studying personnel needs, the Commission has made every effort to make jobs more attractive and lucrative. Studies of our engineering salaries showed that our Department was not keeping pace with other States or with private industry. As a result, we stood in imminent danger of losing young engineering graduates who naturally looked elsewhere for employment. We also stood a good chance of losing some of our own most experienced people to higher paying jobs.

Our Commission endorsed and secured through the State Personnel Council, a new range of engineering salaries with pay raises along the line to bring us up to or above the accepted wage rates elsewhere. By the same token, our maintenance personnel were classified and their job responsibilities outlined for the first time and their work week reduced from 50 to 45 hours.

The Commission also realized the great value of in-service training and has expanded this program rapidly, providing for new courses and securing instructors from within our own ranks. When an employee successfully completes an approved correspondence course, the Commission has agreed to defray half the cost of the course on a reimbursable basis. A better trained employee not only increases his chance for advancement, but he becomes a more valuable employee in his present capacity. The Commission wanted to reward this initiative with more than just a pat on the back.

Another Commission responsibility which bears mention is the uniform policy on retirement. After more than a year of intensive study, a standard age of 65 was approved for automatic retirement. In an organization so large and so important as the Highway Department, it was the Commission's feeling that the policy should be uniformly applied, and that when persons had filled positions

for a long enough time to earn full retirement benefits due them, that they should take advantage of these retirement provisions and make way for qualified younger men. In such a manner, the organization will remain fluid with more room at the top for persons deserving of promotion. One vacancy through retirement has often opened up as many as five or six positions into which other people could be advanced. This incentive to advance which is native to all of us should not be blocked by an unrealistic retirement policy, and I hope that the many persons who have received promotions in our organization recently will work even harder and continue to move up the ladder.

Our Commission has worked very hard to place in the hands of our employees the very latest and most advanced equipment to handle the road job better. Purchase of an electronic computer has relieved many of our engineers of routine desk calculator jobs and left them freer to do the job they were hired for and trained for—designing better highways. In addition, it is an investment which has already paid handsome dividends in providing a broader base for engineering decisions. You can now consider more than just one line for a new highway or one design for an interchange. You can now try many and come forward with one that provides the best traffic service as related to cost.

During these three days, you will hear a great deal about the greater emphasis being placed on advance planning. It is becoming an increasingly more important factor, not only in highways, but in many other agencies of state, county and municipal government. Our Highway Commission was anxious to take advantage of advance planning principles in approving the establishment of a new department staffed with rural and urban planners and transportation engineers. Theirs is the task of determining future trends in North Carolina and then recommending highway facilities so located and so designed that they will fit into the changing patterns of our living.

If we can build highways today which will give effective traffic service to the volumes of 1980 and beyond, we shall avoid the costly rebuilding or relocation which in years past has seen new highways laid out virtually adjacent to other highways. We must understand how and why cities and counties will grow. We must be able to project traffic volume accurately and to spot areas of future industrial, residential and business growth. We must be able to reserve rights of way for future construction. And we must make allowance in the designs of today for easy and inexpensive expansion where we know such expansion will be needed.

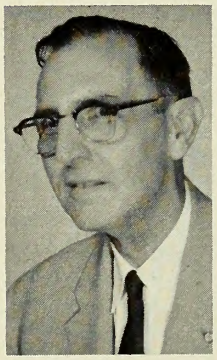
"The Birth of a Highway" is indeed a challenging and complex task. This three-day conference offers each of us the chance to talk over problems, get new ideas and bend our collective efforts toward smoother, better riding in the future.

Changing Concept Of Highway Planning

By James S. Burch

Traffic planning has become the Commission's major highway - street problem. It was not so during the 1920's when many of us started work as Highway Engineers in North Carolina.

Then, there were relatively few cars, no trucks, no buses, and no traffic congestion. The counties had the secondary roads. Our Highway work stopped at the city limits. We were assigned only 5,000 miles to build and maintain. The job was tremendous, but there were few unknowns. The problems were mud, money, and methods. Congestion was unknown. There was no traffic problem in North Carolina.



Burch

The "thirties" were depression and recovery years with acute shortages of funds. Trucks and buses had entered the traffic stream, but traffic problems were found only downtown. The earlier by - passes were being considered, but were violently opposed by merchants. All highways were forced to go down Main Street. Planning was simply connecting the towns, if the money was available, with a two-lane pavement. The only question was the exact location. In the late thirties, traffic troubles were growing, but little interest in their correction could be aroused. The Highway planning Survey Organizations were set up in all the states to gather factual data for the problems to come.

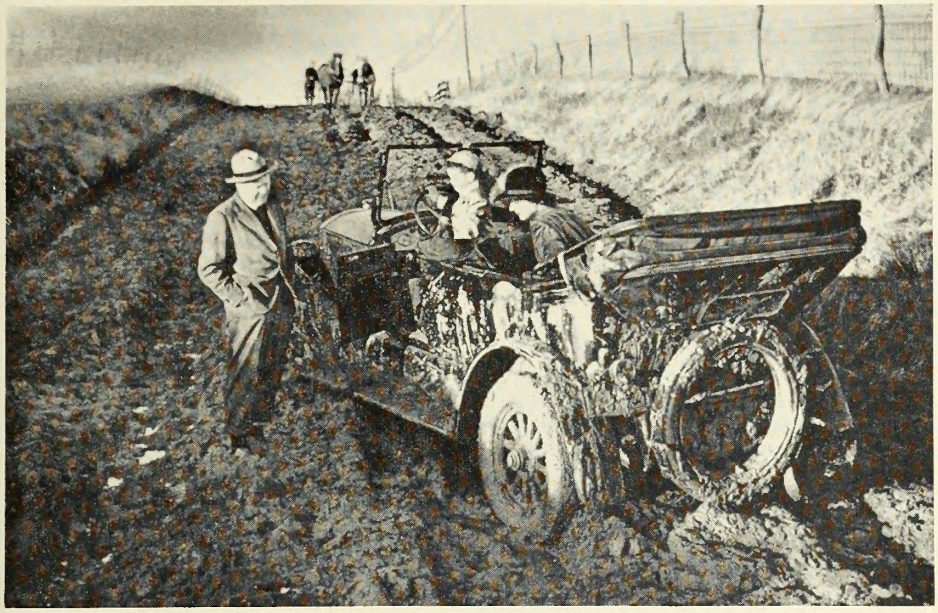
In the early forties, and before much could be done in traffic planning, World War II stopped everything. Traffic was low, due to shortages, the traffic problem was not apparent nor pressing and was generally laid aside locally for the four war years. However, much valuable traffic research work was done then, especially in the elements which determined capacity. The Interregional system was then outlined, later to be replaced by the Interstate System. Traffic research activity was intensive, and later proved to be most valuable.

The late forties were explosive in all traffic matters. Registration figures leaped upward, traffic demand surged to new highs, and we have never yet caught up with it. Congestion was now apparent almost everywhere. Pleas were received for by-passes, even from merchants. Four-lane highways were demanded, but funds for them were not available. Private financing provided the needed expressways in many areas of the nation by means of the Toll Turnpikes. These were very popular, generally successful and gave the traveling public an idea of the advantages of Controlled Access Expressways. The demand for traffic freedom became insistent. The public wanted more. The turnpikes showed the way to the expressways to follow.

Cities began their explosive flight to the suburbs. String development occurred along all highways near cities, decreasing highway capacity and requiring reduced speed limits. Satellite shopping centers began to develop, and the city travel pattern became multi-centered.

Cities generally tried hard to eliminate congestion. They regulated parking, limited turning movement, installed one-way streets and progressive signal systems. But traffic continued to grow. Curb parking became totally saturated, and cities turned to off-street parking lots and garages. Hundreds of rural limited speed highways sections became necessary. The first limited access highway in North Carolina was built about 1949, by-passing Lexington.

Moving quickly through the big $200 million secondary road bond program, and the first Powell Bill Street Aid, it



Getting out of the mud was a real problem when this picture was taken in the 1920's. It still is a problem following heavy snowfalls such as we have had recently. However, around 70% of Secondary Roads with 50 vehicles or more per day are paved, and all but some 90 miles of Primary Roads are hardsurfaced.

became apparent that the major highway problem of the future was traffic congestion. Traffic demands continued to spiral upward—more vehicles—more travel — higher speed, wider cars, heavier trucks.

Much highway widening and remodeling work was done, bridges were widened, many bypasses were built. But near all cities, there was a wall of property development along both sides of all highways, and little could be done in these cases to provide traffic capacity by remodeling existing highways.

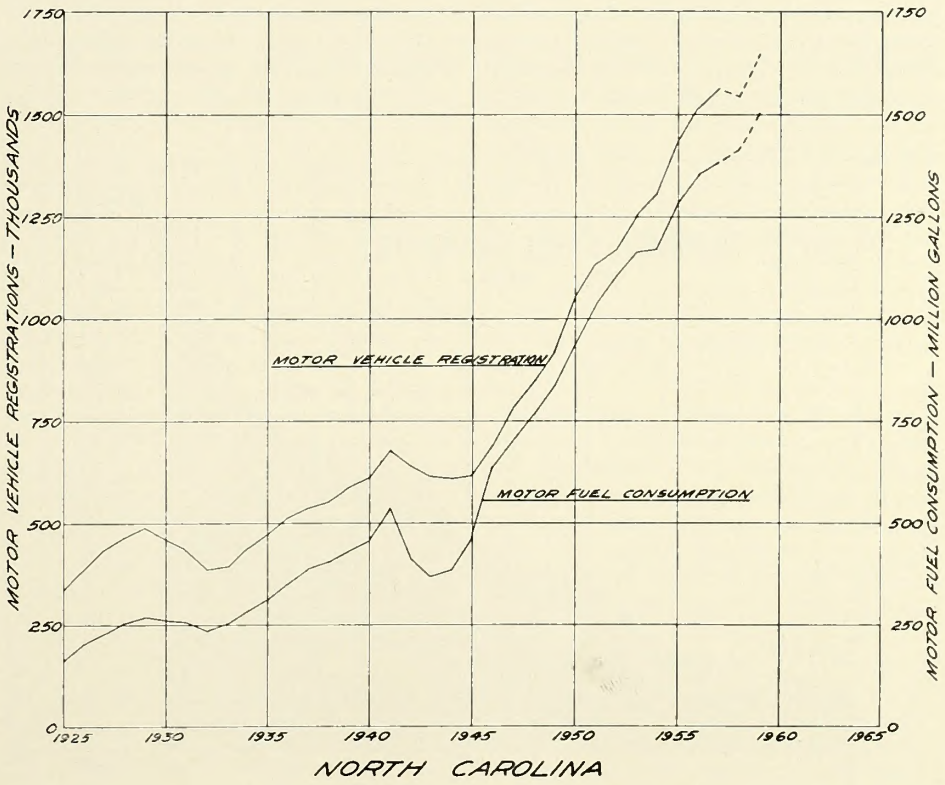
Cities were spilling out beyond their limits and extending their boundaries. The two-car family became prevalent. Customers were patronizing the new shopping centers, and downtown merchants were troubled. Space was becoming limited even outside the cities. Traffic corridors between cities were often hard to find, where a new highway location was sought. Right-of-way costs zoomed upward.

It became evident that the major highways should have access control to provide and assure adequate traffic capacity. Grade separated intersections and interchanges were being more extensively used. However, the attendant costs of these design features and right-of-way were great. The financial ability of the Cities and States to provide expressways were severely limited. Existing street systems were definitely obsolete, but neither plans nor funds were available to provide for vital traffic circulation.

In the early fifties, the President, Congress, and the Nation debated the proposed huge expanded highway program and finally adopted it in 1956. Traffic planning research was put to work in the field of generation, geometrics, characteristics, and forecasts. Design and construction operations moved into high gear. The expected shortage of technical personnel developed. However, heroic work was done to tool up, expand, step up the pace. Digital computers and photogrammetry had been adapted to relieve the engineer-designer of much slow and laborious arithmetic work. Most important, perhaps, was the realization by the State's leadership that the highway and the street are the same facility, and that the over-riding problem was traffic-planning; the needs of growing traffic with only limited space available. Land use and population projections became mandatory, and complete urban thoroughfare planning was recognized as the only possible solution for the future.

The old slogan of "Build quickly to connect A to B to relieve present congestion" was retired; being replaced by the concept of the long-range planning view. This concept considers the whole area problem as it is expected to appear some 20 years hence, in terms of population, land use, and traffic demand. The urban growth in North Carolina is greater than the rural. This urban area is where the problems are and will be. Here is where space is critical and property for right-of way is expensive. Traffic continues to grow. The battle to provide for traffic movement continues.

Thus, the nature of our problems has gradually changed from getting out of the mud, shortage of funds, and

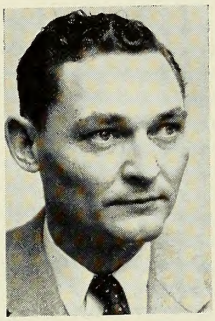


construction techniques; to emphasis on growing traffic demand and traffic speed; expanding population and land use; limited space and traffic capacity; and protection of right-of-way.

We will hear much more about these phases today and tomorrow—and for many years to come.

Financial Planning For Highway Operations

By Ervin Dixon



Dixon

The North Carolina Highway Department, together with the Department of Motor Vehicles, the Prison Department, the Probation Commission, and the Board of Paroles, are financed from the Highway Fund.

Highway Revenue (See Fig. 1)

It should be noted that Motor Fuel Taxes account for well over 60% of all Highway Fund Revenue. The sharp increase during the fiscal year 1949 to 1950 was caused by the increase of the gasoline tax from 6¢ to 7¢ on January 1, 1950. This additional one cent per gallon tax is earmarked for payment of Debt Service on the $200,000,000 Road Bond Issue for the Secondary Road System. Motor Vehicle Taxes, largely in the form of motor vehicle registrations and title fees account for the balance of the State Tax Revenue. And Federal Aid Apportionments account for the balance of all funds accruing to the Highway Fund. Federal Aid Funds are apportioned to North Carolina for the Federal Aid primary, secondary, and urban system on the basis of area, population, and mileage. On the inter-state system, these funds are apportioned on a "needs" basis determined by comparing the relative amount of funds needed to complete the system in North Carolina with the total amount of funds needed to complete the system throughout the nation. During the fiscal year 1959-60, total revenue accruing to the Highway Fund will approximate 169.4 Million Dollars represented by 134.2 Million in State Tax Revenue and 35.2 Million in Federal Aid Apportionments.

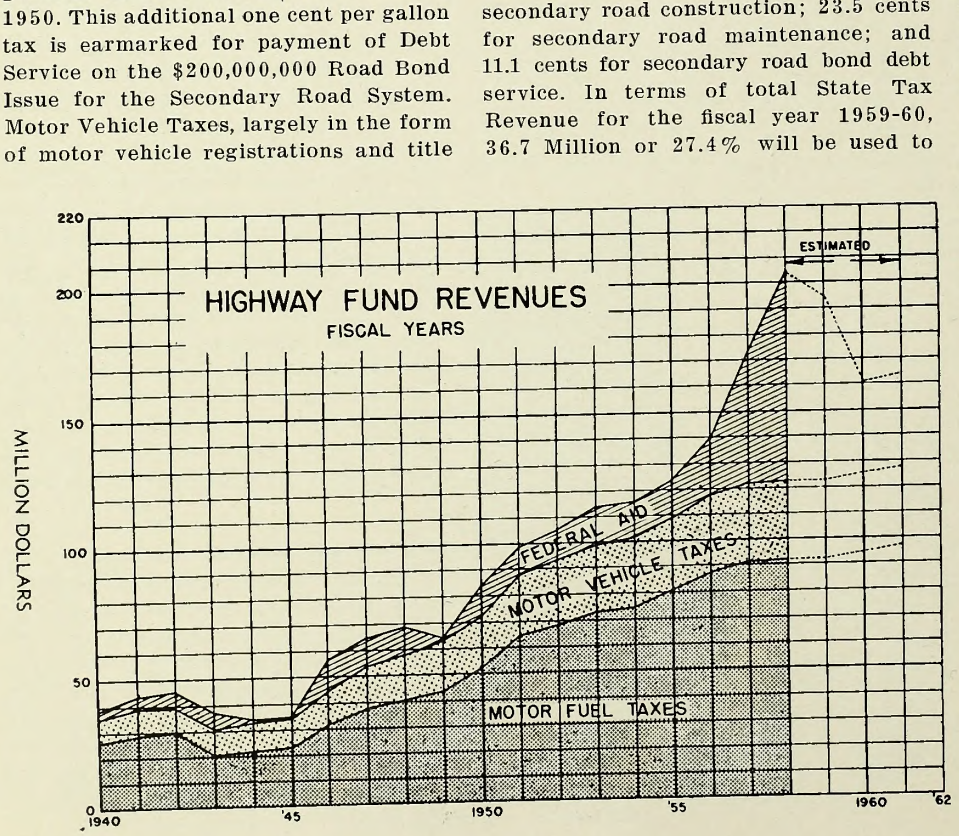
Highway Expenditures (See Fig. 2)

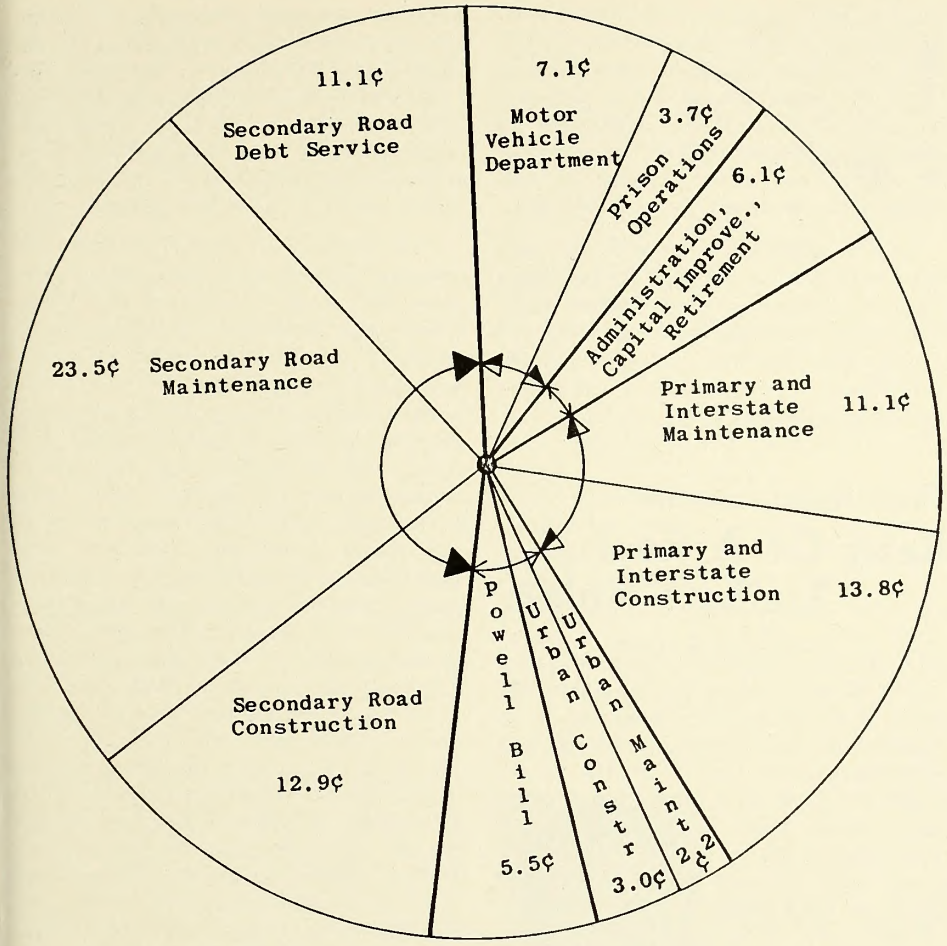
How is the Highway Fund Dollar spent? For each dollar of income to the Highway Fund, 7.1 cents is spent for the operation of the Department of Motor Vehicles; 3.7 cents for Prison operations; 6.1 cents for administration, capital improvements, and retirement under the Highway Department; 11.1 cents for primary and inter-state maintenance; 13.8 cents for primary and inter-state construction; 2.2 cents for urban maintenance; 3.0 cents for urban construction; 5.5 cents for payments as State aid to municipalities under the Powell Bill; 12.9 cents for secondary road construction; 23.5 cents for secondary road maintenance; and 11.1 cents for secondary road bond debt service. In terms of total State Tax Revenue for the fiscal year 1959-60, 36.7 Million or 27.4% will be used to pay the cost of the Department of Motor Vehicles, the Prison Department, the Board of Paroles, the Utilities Commission, the cost of Secondary Road Bond Debt Service, and the cost of State aid to municipalities under the Powell Bill. This leaves a balance of 97.5 Million or 72.6% available to the Highway Department to pay for the administrative costs of its operation and the cost of maintaining and constructing roads. From the 97.5 Million left for the Highway Department, the cost of administration, retirement, and captial improvements will account for 8.2 Million or 6.1% of the total; the cost of maintenance will account for 49.4 Million or 36.8% of the total, leaving a balance available for construction of 39.9 Million or 29.7% of total State funds available for construction.

Financial Trends (See Fig. 3)

It is to be noted that the total Highway Fund has increased from approximately 65 Million Dollars per year in 1950 to almost 120 Million Dollars in 1960. Thus the Highway Fund has almost doubled in the past decade. This has taken place because of the increased population and primarily because the total number of vehicles in North Carolina has increased from slightly less than 1,200,000 vehicles in 1950 to 1,800,000 vehicles in 1960. Although the Highway Fund has almost doubled in the past decade, the amount of money available to the Highway Commission has not increased at this rate. The amount of funds for the non-highway departments (Department of Motor Vehicles, Prison Department, Board of Paroles, etc.) has increased from approximately 3 Million Dollars per year in 1950 to slightly over 22 Million Dollars per year in 1960. It is estimated that the amounts to the non-highway departments and Powell Bill will increase to almost 40 Millon Dollars per year in 1980. The cost of administration and retirements has increased from 4 Million Dollars per year to 6 Million Dollars per year in the past decade.

Maintenance costs have almost doubled —from an average of 24 Million Dollars in 1950 to an average of 47 Million Dollars in 1960. Thus, although the Highway Fund's revenue has almost doubled in the past ten years, the total amount of State funds available for construction has only increased from 33 Million Dollars to 42 Million Dollars, or an increase of only one quarter. Why is this so? Maintenance and administrative costs have almost doubled for two reasons: In the past decade the average annual salary of highway employees has increased by legislative raises from

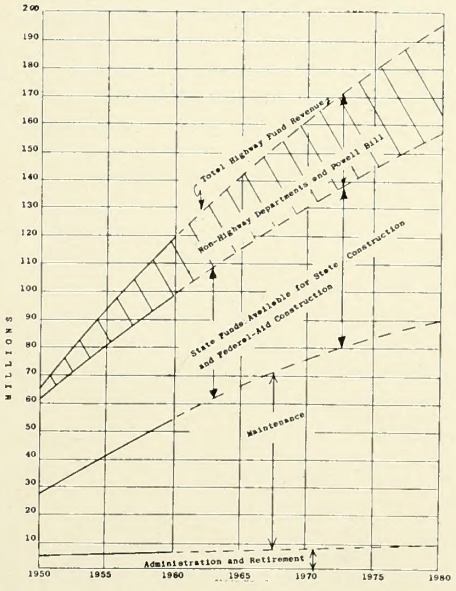




Current Expenditures

$2,400 a year to almost $4,000 per year. This is a 70% increase. Salary increases, therefore, have raised the cost of administration, retirement, maintenance, and the cost of non-highway departments; thus reducing the amount available for construction. Maintenance costs have also increased because it cost $400 a mile to maintain an un-paved road and almost $800 per mile to maintain a paved road. In 1950, there were approximately 17,000 miles of paved roads. In 1960, there are almost 40,000 miles of paved roads. Even though funds available for construction have increased 25% in the past decade, this does not represent a realistic increase because the cost of living has raised the cost of construction almost 25% in the past decade.

What then are the trends for the future? Generally, it would appear that maintenance costs will continue to rise as the new Interstate highway system and four-lane divided highways are constructed. Additional paved mileage on secondary roads will also raise maintenance costs. Additional mileage added to the highway system will increase maintenance costs. Assuming a continuing increase in the cost of living with higher salaries, it would appear that the total cost of maintenance and administration along with retirement benefits will rise to almost 90 Million Dollars in 1980. Along with the support of the non-highway departments, the total



Anticipated Expenditures

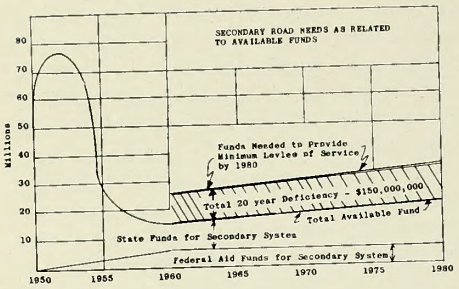
available funds for State construction and to match Federal-aid funds will increase to approximately 67 Million Dollars per year. Considering the total thirty-year period, the total Highway Fund revenue will have increased from 65 Million Dollars to over 195 Million Dollars per year while the available funds for construction will have only increased from 33 Million Dollars to perhaps 67 Million Dollars per year. If the cost of living continues to increase as it has during the last decade, this 67 Million Dollars may not build any more highways than the 33 Million Dollars in 1950.

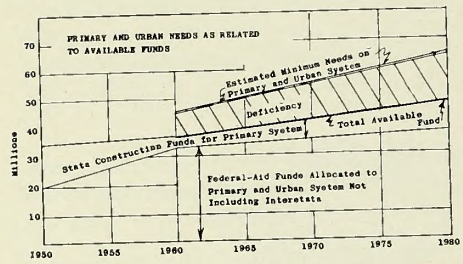
Available Funds As Related To Secondary Road Needs and Primary and Urban Needs

The graph in figure 4 indicates the amount of available funds as related to available funds. The lower portion of this graph shows the amount of Federal Aid funds that must be allocated to the primary and urban system not including the interstate system. For 1960, 35 Million Dollars in Federal Aid funds will be allocated to the primary and urban system; and in 1980, as estimated 38 Million Dollars in Federal Aid funds will be allocated to this system. The next portion of the graph reflects State construction funds for the primary and urban system at an estimated 2 Million dollars in 1960 and an estimated 10 Million Dollars in 1980.

It is expected that the total available funds will be approximately 37 Million Dollars in 1960 and possibly 48 Million Dollars in 1980. Based upon analyses of our primary and urban system, the minimum needs for this system will be approximately 45 Million Dollars per year in 1960 and 65 Million Dollars per year in 1980. Assuming no major increase in construction costs, the deficiency between the total available funds and the minimum needs is shown by the cross-hatching deficiency which will vary from 15 Million to 20 Million Dollars per year.

Approximately 8 Million Dollars per year of Federal-Aid funds will be available to improve the secondary road system. If all of the additional State funds are used to improve the secondary road system, there will be a total available fund of only 16 Million Dollars per year in 1960 and approximately 22 Million Dollars per year in 1980. It should be noted that during the period 1950 to 1955 the Highway Commission was spending funds from the 200 Million Dollar bond issue at the rate of approximately 50 Million Dollars with a maxi-





mum in one year of 77 Million Dollars. In the last few years, there has been a drastic reduction in the amount of funds available for the secondary road system. The Highway Commission will need an additional 7 to 8 Million Dollars per year, or a total of 150 Million Dollars to provide for our basic minimum needs for the secondary roads system for the period 1960 through 1980.

With this somewhat brief presentation of our overall highway financial picture, we, who are assembled here today, should be cognizant of the challenges with which we are faced. I should like to mention a few of them.

As our maintenance costs continue to rise with additional salary increases, addition of roads to our system, and the paving of non-surfaced roads, what can we do through technological improvements, revisions in our maintenance policies, etc. to retard the increasing maintenance costs and use these dollars for construction without sacrificing the level of our maintenance services.

Finally, can the placing of adequate planning in its proper perspective — planning through the analysis and prediction of population centers with the industrial growth of our State; forecasting our highway needs in relation to predicted traffic patterns and volumes; planning to meet the desired level of services on our rural roads and through our thoroughfare areas, etc.— squeeze more of our long-range construction needs from the presently predicted available construction funds.

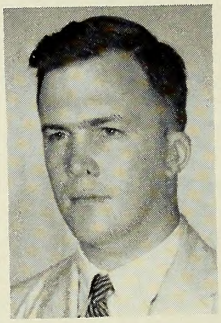
These are but a few of the challenges indicated by the past, present, and future financial trends of the North Carolina State Highway Commission. Others come to mind such as the probable need for additional State tax revenue to finance the continued rise in operating cost of other State departments financed from the Highway Fund; the expanding prison population beyond the point of efficient utilization for highway maintenance and construction activities, etc.

I leave these thoughts with you and hope that this, our second Annual State Highway Conference, will further stimulate your thinking in these areas and provide you not only with some of the conclusions but also with a rewarding and enjoyable time.

Population Boom: Basis Of A Real Traffic Problem

By George Stephens

The single largest factor which dictates the amount of traffic on most roads is the amount of populations in a relatively small area tributary to the road. Even in this day when people drive from coast to coast, from Florida to New York, and from one end of the State to the other, we find that most traffic is traveling a relatively short distance. In fact about 85% of the trips are fifteen miles or less.



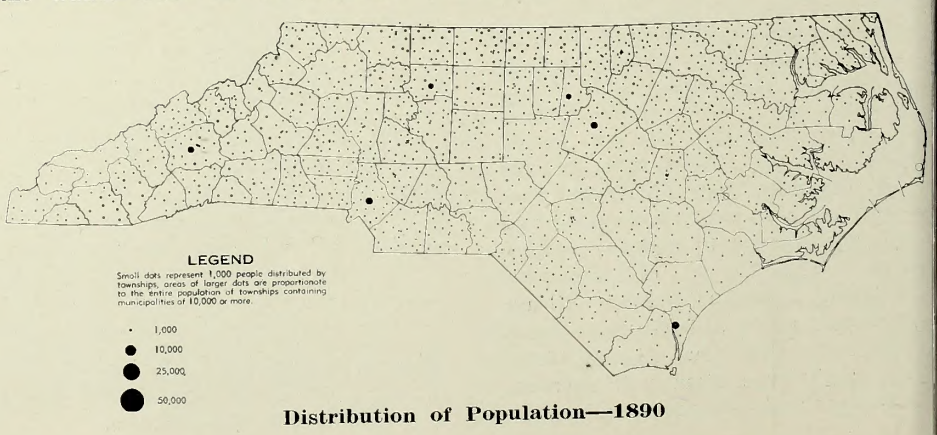
Stephens

It is also a fact that most of the longer distance trips have their destination in a city, and also the larger the city the more trips will be destined for it. More about this later.

With this population and traffic relationship in mind the Highway Department realized that if it was to foresee the traffic loads on the highways of 1980, it would be necessary to foresee the location of the population at the same date. It wanted to know particularly where the concentrations of populations would be; that is, the Urban Areas or Cities, and it wanted to know what changes are in store in the population pattern of North Carolina.

The Advance Planning Division undertook a year long study which was essentially analysis of past population trends and projection of these trends over the next 20 year period. A report was produced which gives population projections for each County in the State, for each market area surrounding a City (and a market area includes a group of several counties dominated by a City), each of the three regions of the State: Mountain, Piedmont, and Eastern, and a projection for the State itself. In order to make the projections realistic each of the units just mentioned was keyed into the projections for next larger unit, so that, in effect, there was a reasonable "frame" for the population of each unit. Thus, the population of North Carolina was projected on the basis of the historical trend of its percentage of the Southeastern United States' population, and the Southeastern United States population, which had been predicted by the Census Bureau, was tied to the total United States population, also predicted by the Census Bureau. The report is 139 pages with tables of historical and projected data, and graph illustrations, so that the eye can make a quick comparison of population trends, several maps showing the distribution of population and considerable text explaining why and how the study was done.

In order to have manageable units for projecting the population the State was divided. Basically the State was divided into the Eastern region, the Piedmont, and the Mountain region. Each of the regions was divided into areas of economic influence, or market areas; for example, the Asheville mar-



Distribution of Population—1890

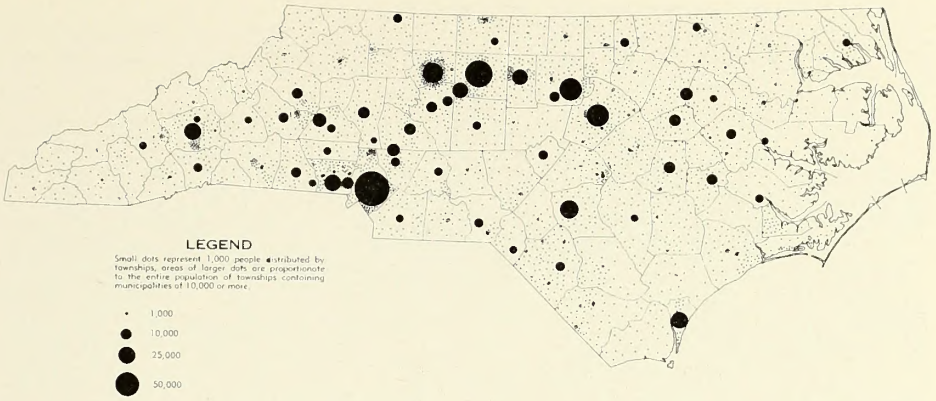
ket area, the Charlotte market area, the Raleigh market area and the Wilmington area. There are several others, and you will perhaps notice that some of the counties are oriented toward Cities in adjoining States. These market areas, as I pointed out before, are combinations of several adjoining counties around a City nucleus.

We expect a 52.4% increase in population of the State between 1950, the last census year, and 1980. Numerically this is 2,128,000 more citizens. Of this projected increase 28.2% is expected to occur in the Charlotte market area, 17.4% in the Greensboro market area, 8.9% in the Winston-Salem market area, 7.8% in the Raleigh market area, 7.3% in the Durham market area and with somewhat smaller percentage increases in the Hickory, Fayetteville, Asheville, Wilmington, Rocky Mount-Wilson market areas. All others combined will have only 4.8% increase. The Piedmont will probably get the lions share.

Mecklenburg county is expected to get 14.5% of the total State increase in the next 20 years, while Guilford will get about 12%. Other counties growing are Wake, Forsyth, Gaston, Durham, Buncombe, Cumberland, Alamance and Catawba. Among them these counties will get 61% of the increase, and they are generally the counties that contain the largest cities. All other counties will get only 38.5% of the increase.

What I have just pointed out, illustrates rather clearly that our Highway problem is becoming an increasingly Urban oriented one, at least as far as the Primary and Interstate System is concerned. Where the cities are there you will find traffic, and it is between these large concentrations of population that most of the long trip traffic will move.

This study would be of no more than academic interest if it could not be converted into terms of traffic, which is our primary concern. This process of conversion is going on now. As long ago as the 1890's it had been observed by certain people that the number of trips between any two cities was portional to the square root of the product of the populations divided by the distance squared. This is just a fancy way of saying that the more population there is in any pair of cities the more trips there will be between them. However, it also means that the distance between the two cities has population. Thus, two small cities very close together may have a much higher traffic volume between them than two large cities a very long way apart. Knowing this relationship and knowing the expected population for the year 1980, we are then able to predict with reasonable accuracy the volumes of traffic to be expected on our highways.



Distribution of Population—1980. Each dot represents 1,000 population.

We also have a responsibility for many city streets, and in urban areas the problem of predicting traffic is roughly the same. We must find out how the population is distributed in the city to find out how the traffic will be moving.

The How and Why of Traffic Movement

James S. Burch

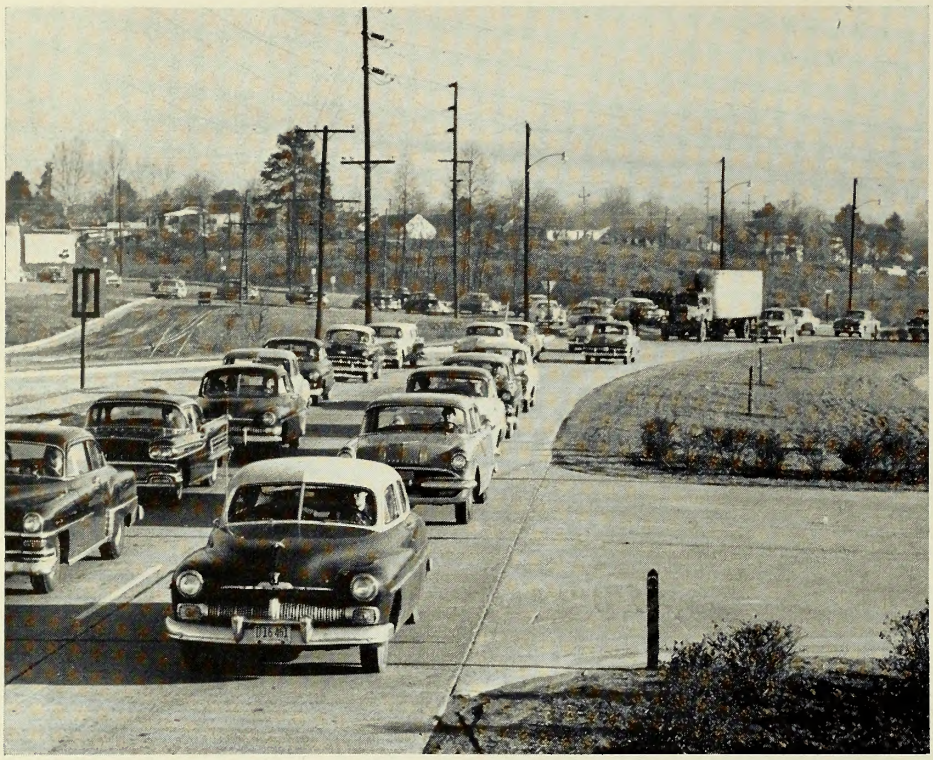
There are many false conceptions about traffic. Much has been assumed which is incorrect. In the past 20 years, we have made many special traffic studies all over the state. Much traffic research has been done in the state and the nation, and much knowledge has emerged.

Contrary to facts, many people assume traffic is mainly long through trips. The truth is, the majority are short, local trips, connected to home and work. Traffic volume depends on nearby population. Drivers select routes to save time, not distance. The daily peak hour has about 9 per cent of the 24 hour traffic.

Types of studies we have made include External, Internal, and Home Interview Origin-Destination Traffic Surveys, Parking Demand and Supply, Speed and Delay studies of Vehicle progress, Turning Movements studies, and "Interaction Demand" studies. Others include traffic generation factors per dwelling, rural and urban; farm and industrial; the effect of driveway traffic discharge on traffic flow. From these and others emerge guiding knowledge of traffic patterns of great value in planning to serve traffic.

We have access to much national traffic and planning research. We are in constant study and committee work on such problems in the research field.

The Commission is presently sponsoring a Research Study at State College to determine the characteristics of travel by families living in so-called rural open areas of North Carolina, and the effect of industrial growth upon the travel habits of these families.



Portions of Downtown Boulevard in Raleigh are carrying 30,000 vehicles per day. It is the busiest thoroughfare in North Carolina. A current project is the separation of Downtown Boulevard from Fairview Road shown in the background.

The study is being conducted by the Graduate Transportation Division of the Civil Engineering Department of North Carolina State College.

To date, approximately 5,000 families scattered at random throughout North Carolina have been interviewed concerning the number of trips they make per day, the purpose of trip, the distance traveled, the number of licensed drivers in the household, and many other questions. This data is now being analyzed on our electronic computer.

Some typical results found to date are: The average family living in the rural area of North Carolina owns 1.15 registered vehicles and makes 3.1 one-way vehicle trips per day. The average length of trip is only 7.2 miles. The average total travel per family per day is 22.2 miles.

It is also interesting to note that the average family that farms as employment drives only 13.8 miles per day; whereas, the average family that is industrially employed travels 28.2 miles per day. The families that both farm and work in industry travel an average of 32.8 miles per day.

The average length of trip for those employed on the farm is 5.5 miles; whereas, the average length of trip for those working in industry is 8.2 miles.

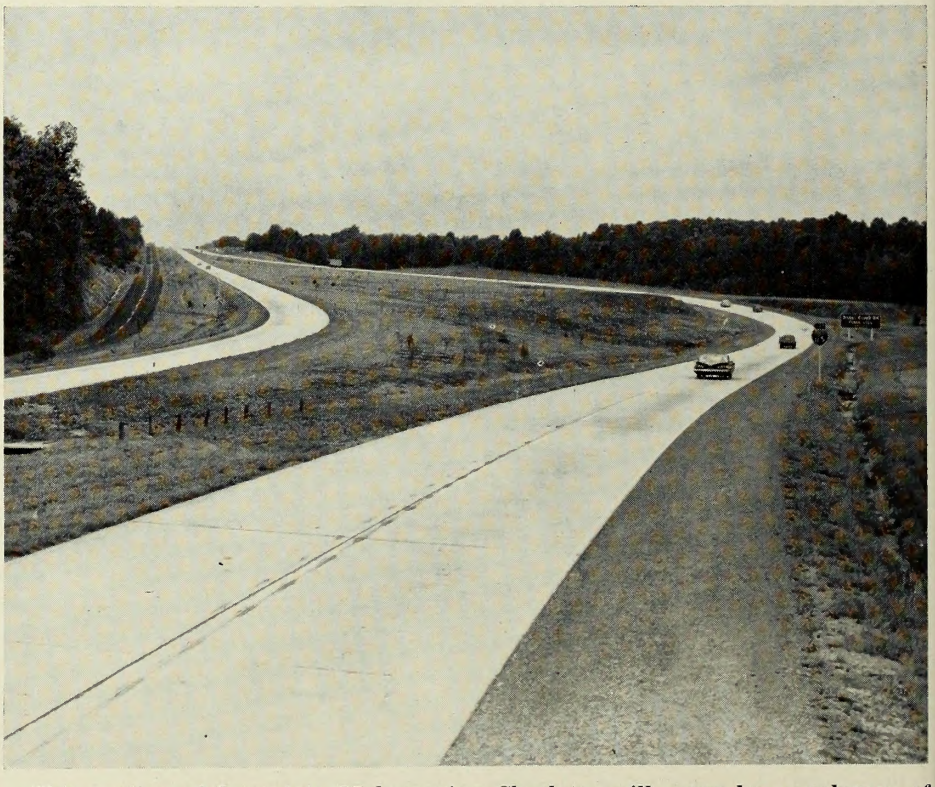
Ultimately, the data will produce approximately 5,000 ratios of this type for the entire state.

The data is now being further programmed in order that ratios, such as average trips per day per family can be found for individual areas of the state. As an example, we want to compare the characteristics of travel for rural dwellers in the Coastal Plain with those in the Piedmont Area. And, the data may. in time, be broken down such that the characteristics of travel for individual counties may be compared.

These data will be of special value for planning purposes on the secondary road system, and especially in industrial areas. They will also aid in evaluating land use in terms of traffic generation.

Another project being similarly conducted pertains to traffic operations. This study is attempting to determine the traffic turbulence which roadside development exerts upon passing traffic. (i. e., filling stations, motels, stores, homes, etc.)

There are many miles of rural two-lane highways with commercial development strung along both sides, and the majority of traffic wants to travel these sections at rural highway speeds. In order to determine if there are sufficient and safe ways to do this, it is important to first determine in what ways the roadside development actually affects the traffic flow.



This portion of Interstate 85 bypassing Charlotte will carry large volumes of traffic today and in future years. Access control is complete.

One of the interesting findings of this study, thus far, is that the number of turning movements to and from the traffic stream is directly related to the gross amount of the roadside business, and its type.

To measure the effect that the turning movements have upon the speed of the pasing traffic, the project has used a Speed and Delay Recorder which graphically records the speeds, stops, and changes in speed of the traffic flow. Other studies concern the turning movements as related to the operational characteristics of the through traffic. It is hoped that this information will furnish highway designers and planners with another tool to use in making plans for highway remodeling and for design.

Planning A System To Serve Rural Needs

By John P. Swain and Bill Ingram

The Secondary Roads System in this State is one of the largest systems that can be found anywhere in this country. There are approximately 58,000 miles of Secondary Roads on our System. Located on this mileage are approximately 16,000 bridges. The mileage in the counties range from approximately 1300 miles in Wake and Guilford Counties to approximately 132 miles in Dare County.



Swain

Since the expenditure during the late 40's and early 50's during the "Bond Program" of some two hundred million dollars on the Secondary Roads System, there has developed a general feeling among the people throughout the State that very few of the miles on the Secondary System remain unpaved or unimproved and that adequate funds are available for almost any type of improvement. Although North Carolina certainly has one of the better constructed and maintained Secondary Road Systems in this country, there still remains a tremendous amount of work to be accomplished in order to provide adequate secondary facilities in each of our counties. Of the 58,000 miles of roads on the Secondary System, 24,000 miles are paved, the remaining 34,000 miles unpaved. The paved portion of the Secondary System represents approximately 40 per cent of the total mileage.

An analysis of the Secondary Roads System in each of the counties made in 1947 revealed that Secondary Road construction and improvements in each of the counties has not been accomplished on a uniform basis in the past. It is readily apparent that some counties have a higher percentage of paved roads than others. When comparing the percentages of roads eligible to be paved (paved roads and unpaved roads with average traffic volumes of 50 or more vehicles per day versus paved roads), the lack of uniformity is even more apparent. The percentages vary from a high of 95 to a low of 55 per cent. Even comparing the percentages on a Division-wide basis, there are very few divisions where the percentages are comparable for the counties in that division. The same situation exists with respect to the need for improving the unpaved portion of the Secondary Roads System. Again, the same situation has developed as far as construction and improvement of bridges on the Secondary Roads System is concerned. Comparing the total number of bridges throughout the State, we find that in some counties there are very few substandard bridges while in other counties there are several hundred that are so classified. It is readily apparent that some method had to be devised in order to bring about more uniformity with respect to Secondary Road and bridge construction and improvements in each of the counties.

Goals of Secondary Road Programs

Prior to the time that information can be gathered to determine general needs and programs established to accomplish these needs, it is necessary that goals or objectives be established in order to plan programs logically to take care of needs. In line with this, the Highway Commission has developed the following general objectives as related to the Secondary Roads System:

a. To provide a uniform level of Secondary Road service in each of the counties throughout the State.

b. To accomplish a uniform level of service in each of the counties by allocating funds to a county based upon the relative need of that county as compared to another county. This will provide at some future date a uniform level of Secondary Road facilities in each of the counties.

c. The objective of using available funds within a county based on the relative importance of the various roads.

With these objectives in mind, the Highway Commission established the following minimum levels of service for all Secondary Roads:

1. Adequate drainage.

2. Widths that will permit two-way travel except in mountainous areas where topography is a limitation.

3. All-weather surfaces which can be used in all except extreme weather conditions.

4. Structures with a capacity of at least 8 tons and a roadway width of 18 feet minimum.

5. Paving all roads with average annual traffic volumes of 50 or more vehicles per day.

Development of Needs

Keeping the minimum levels of service to be provided in mind, it was next necessary to determine the needs of the Secondary Roads System in each of the counties throughout the State. Initially emphasis has been placed on determining the needs of the unpaved system. A comprehensive survey was launched in the fall of 1957 and updated during the spring of 1959 to determine the needs of the unpaved portion of the Secondary System. Every unpaved road in each of the counties throughout the State has been rated together with any structures located on the road, and it has been determined whether or not each unpaved road is:



Ingram

1. Presently built to meet minimum standards,

2. Presently substandard in need of minor improvements to bring the road to minimum standards, or

3. Substandard in need of major improvements to bring it up to minimum standards.

In addition to this, the cost to improve each road to minimum standards has been estimated based on the average cost of contract construction in that area. Finally, the additional cost to pave all roads carrying average annual 24-hour traffic volumes of 50 or more vehicles per day has been computed. By simply adding the estimated cost of improving and paving roads in each of the counties to meet minimum standards, we can arrive at the total cost of providing Secondary Road facilities that will meet minimum standards. Once this was determined for each of the counties throughout the State, we were able to compare the relative needs of all the counties.

We hope to be able within the near future to forecast more adequately the needs of the paved Secondary Road System in each county.

The need for bridge improvements can readily be tabulated from information submitted by the Bridge Department. This data includes the location and size of every substandard bridge throughout the State together with the estimated cost to replace.

It is almost impossible to predict accurately the need for industrial access roads and school drives. We have been able up until now to take care of these facilities as the need arises. It will be necessary that more attention be given this area in order to plan ahead for future needs.

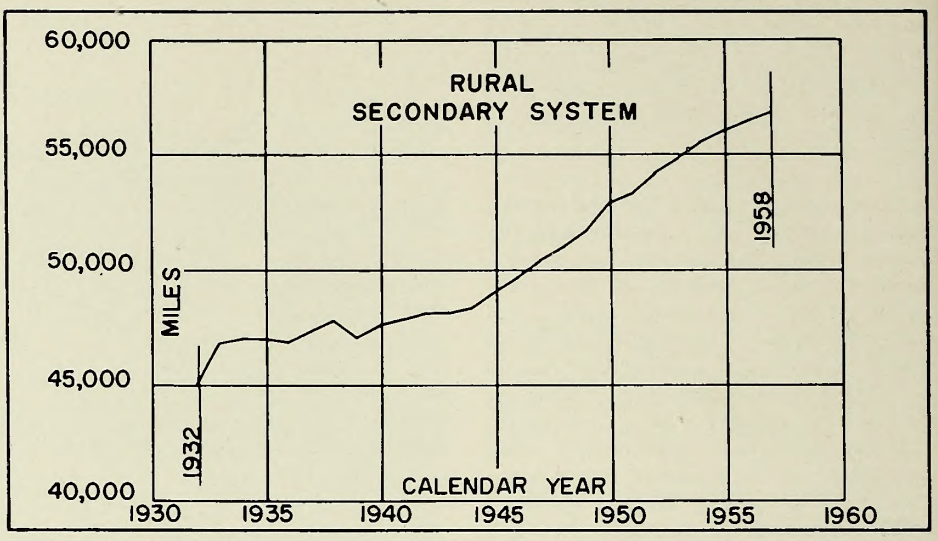
Development of Programs

Secondary Road construction programs to reduce needs have been developed to cover four major areas within the Secondary Roads System:

1. Unpaved roads
2. Paved roads
3. Bridges
4. Industrial access roads

In each of the counties throughout the State prior to the beginning of the fiscal year, a Secondary Road Plan is developed. A Secondary Road Plan for any county is essentially an outline of how and where available funds are to be spent. As far as construction is concerned, the Secondary Road Plan construction items generally include the improvement of unpaved roads. Most of the projects included in Secondary Road Plans call either for paving roads or making general improvements such as widening, draining, and stabilizing.

Recognizing the need that some funds must be set up to construct and reconstruct portions of the paved Secondary System, the Highway Commission from time to time allots funds for this purpose. As of this date we do not have a complete inventory of the total needs for major Secondary Road improvements. Presently projects on paved Secondary Roads are selected based on the recommendations of Division Engineers, County Commissioners, and others and are submitted to the Highway Commission for final approval.



Also, additional programs may be set up for the improvement of major substandard bridges located on either paved or unpaved roads. This program may be entirely a bridge program or, as is sometimes the case, major bridge improvement projects are included with paved Secondary Road improvement programs.

The final type of program that has been developed for Secondary Roads is that of providing access roads to new and expanding industrial facilities. This program is also adaptable for including other specific construction items such as improvement of drives at schools and State-wide traffic engineering projects.

Funds

Prior to the beginning of each fiscal year the Highway Commission approves the total amount of funds to be used for Secondary Road Plan construction throughout the State. At the present time these funds have been allocated to each of the counties based on the cost of bringing the unpaved roads in any county up to minimum standards as compared with all other counties in the State. For the past three fiscal years the Highway Commission has allocated 9.6 million dollars, 16 million dollars, and 18 million dollars, in that order, for this purpose. At the time we last brought our unpaved Secondary Road needs up to date, it was estimated that to bring all unpaved roads up to minimum standards and to pave all Secondary Roads having average volumes of 50 or more vehicles per day it would require an expenditure of approximately 550 million dollars. Based on the present rate of spending, it would take in the order of 35 years to provide this service. Also, we would have to assume that there would be no material increase in the Secondary System and that the cost of construction would not increase during this period. Assuming that a 20-year period of time was deemed adequate, to bring all unpaved roads up to minimum standards and pave those roads having traffic volumes of 50 or more vehicles per day, it would take approximately one hundred fifty million dollars during the 20-year period in addition to those funds now available and expected in the future. This also assumes that there would be no great increase in the present cost of construction.

There has been no definite amount set up for any one year by the Highway Commission for the improvement of the paved Secondary Roads on the System or the improvement of major substandard bridges on the Secondary Roads System. In the past three years approximately 8 million dollars has been set aside by the Commission for this purpose. Approximately two years ago 2 million dollars was allocated specifically for the reconstruction of major bridges throughout the State. Within this program we were able to replace 27 bridges out of some 4,500 substandard bridges. The last State-wide program that was

set up and included the construction and reconstruction of major substandard bridges included 20 additional major Secondary bridges.

The improvement of paved portions of the Secondary Roads System is scheduled from time to time depending on the available funds from the Highway Commission. During the past three fiscal years, 4 million dollars has been set aside by the Commission for this type of improvement. Projects that have been included in such programs generally involve minor relocations, widening, and resurfacing roads that have become inadequate due to pavement widths and present and future traffic volumes.

The remaining fund that is available for Secondary Road improvements is for construction of access roads to industries, schools, and other public institutions as well as the improvement of school drives and school bus parking areas. Five hundred thousand dollars was budgeted for this purpose for the 1960-61 fiscal year. As of this date over 2 million dollars has been allocated to specific projects over the past two years. With the rise of industrial construction and expansion in this State today, together with new schools being constructed in almost every county, it is felt that the need for such a fund will increase in the future. At the present time 500 thousand dollars is considered to be a minimum amount necessary to provide industrial expansion and also the increase in school construction throughout the State.

Research

Maintenance on the Secondary Roads System amounted to approximately 58 million dollars during the past biennium. It takes approximately $0.23 of each present highway fund dollar to provide secondary maintenance. This was approximately twice the amount that was expended for new secondary construction during the same period. This points out not only the need for more efficient methods of maintenance but also a need for a closer look at construction methods and techniques in order that Secondary Roads constructed in the future may be more economically maintained. In line with this, the Highway Commission has entered into a cooperative research program with the Bureau of Public Roads and North Carolina State College. Basically, the research that has been accomplished to date for Secondary Roads deals with three basic subjects.

One research project was begun early last fall and deals with base construction techniques both for mechanically stabilized bases and for chemically stabilized bases. Most of the test sections are now undergoing their first winter of use, and it will be some time before any conclusions can be drawn from test observations.

From the research in soil stabilization methods savings of hundreds of thousands of dollars could be effected. Following winter heaving and breakup in 1958, the Highway Commission allocated almost a million extra dollars to Division 11, 13, and 14 to restore weather-damaged highways.

Another research project that has been started will be of great value in planning for Secondary Road improvement in the future. This research study concerns the travel habits of those using Secondary Roads and the effect of industrial growth upon these travel habits.

Finally, State College is now running strength tests on a precast prestressed bridge that can be utilized on Secondary Roads where the spans are not great.

In review, if we are to provide for the orderly development of the Secondary Roads System in each of our counties, it will be necessary to constantly review the total needs of each county and provide programs that will most efficiently take care of these needs. In addition to this, it is the duty of each of us to review methods and techniques constantly so as to provide the best possible construction to provide the most economical facilities for the future.

The Thoroughfare Plan:

A Must For Solving Urban Problems

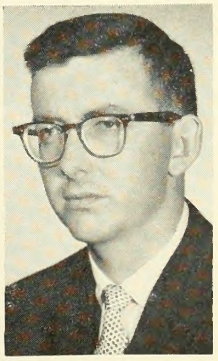
By George Stephens and Billy Rose

Before discussing the solution of Urban traffic problems let's consider why the Highway Department has any responsibility for solving them. In simplest terms it is because we share with municipalities the problem of moving traffic into, out of and through towns and cities. At the outset of highway building, highways were very rural in nature and Highway Department responsibilities tended to end at the city limits. Any traffic movement that went on inside of the municipal boundaries was taken care of by the city.

However, it was gradually realized that the Highway Department should have a responsibility, because much of the traffic starts or ends in a city, and that a great deal of it is destined for another city. This, you will remember, was pointed out in the population explanation and was pointed out by Mr. Burch in the "How and Why of Traffic Movement". North Carolina, in particular, came to have a sizeable rural nonfarm population which, in plain English, means that these people were living outside of cities in rural surroundings, but were working inside of the cities. Therefore, the State began to build and maintain more and more routes into and through the cities.

The resulting Urban Highway System was a sometimes haphazard affair with a little bit added here and a little bit added there. Then the 1959 Legislature passed an act which clearly defines the responsibility of the State for an Urban highway system.

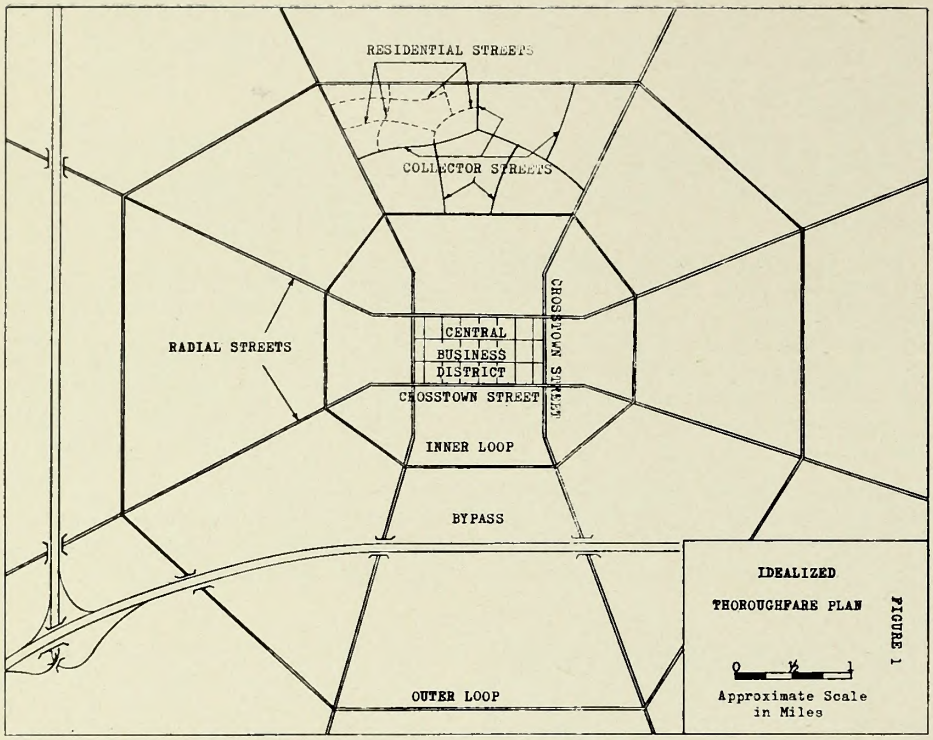
Generally, this law says that the State Highway System inside the corporate limits of municipalities shall consist of "a system of major streets and highways necessary to move volumes of traffic efficiently and effectively from points beyond the corporate limits of the municipalities through the municipalities and to major business and industrial, governmental and institutional destinations located inside the municipalities".



Rose

Then this is why we are responsible for helping to solve the Urban traffic problem and why we are in the Thoroughfare Planning business.

The next question to which we should turn our attention is: What is the nature of this Urban traffic problem? What causes traffic jams and congestion?



Among the elements are: haphazard street systems, narrow streets, inefficient use of the streets we have, poor street design, uses of abutting or adjacent properties which are not conducive to good street operations, lack of off-street parking and, strange as it may seem, too many through-streets.

Generally, what it boils down to is that the city dweller, the farmer who comes to market and the trucker delivering a shipment can't get from here to there in the city with what he considers to be reasonable ease and in reasonable time, and this brings us to the question: What can be done about it?

The common reaction to encountering a traffic jam or getting into a slow moving line of cars on a street is that "the street needs to be widened". But things are not always what they seem, and this is not always the case in the solution to the traffic problem.

The two actual approaches to the solution are: through Traffic Engineering through Thoroughfare Planning, and actually, neither of them is independent of the other; they must be coordinated to get the best results.

Traffic Engineering, briefly, is getting the most efficiency out of the existing street system. This involves such things as channelization, traffic signals, proper signing, one-way streets and elimination of parking.

The Major Thoroughfare Plan approach to the solution is based upon the concept that different types of streets serve different purposes. There is the Residential street, whose principal use is to give access to abutting property. It is not expected to carry much traffic and is not designed for high speed.

Another type of street is the Collector street. It is for the purpose of collecting traffic from the residential streets and distributing it to the major thoroughfares. It is partly to serve abutting property and partly to carry traffic.

Major Thoroughfare

The third type of street, the Major Thoroughfare, is chiefly for the purpose of carrying traffic and only incidently to serve abutting property. In a good neighborhood design the major throughfares encircle the neighborhood rather than running through it. This arrangement both serves the heavy traffic movement better and preserves peace and quiet for the residences.

In approaching the problem of planning a major thoroughfare system, it is important to remember that the object is to develop a coordinated system which will tie together the major traffic generators such as: the downtown business district, industrial areas, shopping centers, wholesaling points and residential areas.

There are two major theoretical systems which would do this job. One is the "grid". This kind of system has the advantage that is very simple to lay out on the ground, it makes utilities design simpler, and it is easy to find one's way around on such a system. Its disadvantages are that every street becomes a through street, that there is no way to compensate for natural topographic barriers such as rivers or cliffs, and that with a coordinated signal system you would find that every time you turned right or left you would be confronted with a red light at the next block.

The other major type of idealized thoroughfare system is known as the "radial-circumferential" system. This type might also be known as the "spiderweb". It has the advantage that there are very few through streets, that it is easier to designate the major thoroughfares, that the major thoroughfares can be made to run along the borders of neighborhoods and that it provides a system on which a vehicle can move fairly directly toward its destination in any direction. It is also relatively easy to make allowances in this type of system for irregularties in the topography. Its chief disadvantage is in the provision of utilities. It is also perhaps more difficult to find an unfamiliar address in the city because it does not lend itself easily to systematic numbering of streets and houses.

The central business district, which is the economic heart of the city, is the focus of most of the traffic. "Radial" streets generally serve to bring traffic in from outlying areas to the central business district. The major throughfares which run along the edge of the central business district are called "cross-towns" and a combination of all cross-towns forms a loop around the central business district. It is considered desirable to have this loop as a sort of bypass for the central business district and a distributor of traffic into and out of it. It is not generally good to have major thoroughfares in the central business district where this heavy traffic becomes involved with shopping traffic and pedestrians. The ring streets are generally called "loops" and there may be one or more of them depending on the size of the city. Their purpose is to distribute traffic in the outlying areas of the city and to allow it to interchange between radials. A trip is seldom made exclusively on a loop, but many trips will be made on a combination of radials and loops.

The "bypass" is considered a definite part of the thoroughfare plan and its purpose, as you know, is to allow traffic which has no destination in the city to pass by it without having to compete with the traffic on the city streets.

Expressways, or high speed, complete control of access highways, are often used as elements of the major thoroughfare system or sometimes an expressway system is used instead of another type of plan. Their chief use is in situations where it is necessary to concentrate traffic in a few corridors rather than to disburse traffic as the radial-circumferential plan does. They may be necessary in mountainous areas, for instance, because the valleys may dictate corridors where traffic has to be concentrated.

Of course the actual problem of thoroughfare planning is seldom done where an idealized system can be laid out. In fact, it is usually done in a situation where a city is in pretty bad shape, as far as traffic is concerned, and needs help. Some of the streets are adequate and some aren't. Some of the ones which are adequate to carry heavy traffic may possibly be located in the wrong place to serve as thoroughfares in a coordinated system. Generally, we find that the elements of the idealized system which are missing in almost all North Carolina towns are the loops and contrary perhaps to general opinion it is often found that there are too many streets in any given city rather than too few.

In simplified terms the procedure in Thoroughfare Planning is to sketch a geometric system of thoroughfares on an urban area map and to dimension the system after the system is selected. In other terms "dimension" means that roadway widths and right-of-way widths must be specified for each street on the system, and this is in turn dictated by the amount of traffic calculated to be on the future system. Actually, the system can not be pre-selected and frozen unchangeably, because after the dimensioning is done on a particular street, it may turn out that there is no possibility of getting more roadway width to carry the traffic and therefore another corridor or another street must be selected to go on the system.

Considerable inventory and analysis goes into thoroughfare planning and among the inventory items are: a study of the existing street system, measurements of roadway width and right-of-way, existing traffic and the capacity of the streets to carry future traffic: that is, how many vehicles per hour or per day any given street could possibly carry. An analysis is made of the land use pattern in the city. This means that an on-the-spot survey is made of the use of each parcel of land in the city and a map is produced showing it graphically. This is necessary to determine how much traffic will come from and to each area of the city.

Since in thoroughfare planning the target date of the plan is usually some twenty years in the future, it is necessary to do a study of future economic and population prospects. This includes, particularly, estimates of where future employment concentrations will be, how many employees there will be in any district in the city, and where people will be residing and how many people will be living in any particular district. A future land development plan is made. This gives a very good indication of where the traffic will be coming from and where it will be going, because we know the traffic generation characteristics of any particular type of land use, such as how many trips there will be per day between an acre of residence and an acre of shopping area. From this we can make a map which shows the future volume of traffic desiring to move between any pair of districts within the city. Another way to calculate this traffic is to inventory, by field surveys, the existing traffic movements, and this is done in origin and destination survey as explained by Mr. Burch. The existing traffic movements can then be expanded according to the changes forecast in the land development plan and the population forecast.

Once these forecasts of future desires of traffic movement are made the next step is to assign this traffic to major thoroughfare system streets, that is to decide what routes it will take. From any one point in the city to another there are several alternate routes, and it is necessary to take the total volume expected betwen two districts and distribute it among the possible routes. When this is done one can then make a map of the major thoroughfares with the expected traffic volumes written in on it. As indicated earlier, it may be found that there will be more traffic expected on a major thoroughfare than the thoroughfare can possibly be made to handle. In this case certain adjustments must be made either in the thoroughfare system or in the land use system, because you must remember that it is possible to change the use districts in the land use plan as well as to change the thoroughfares. Thus, a proposed industrial park could be relocated to relieve a particular thoroughfare, or a shopping center location might be moved, residential density in a section of the city might be reduced. These results can be brought about by the zoning plan of the city, by the city's policy on the extension of utilities, and by the withholding or providing of street facilities.

When the future traffic has been calculated on each of the major thoroughfares, and when the general standards of roadway and right-of-way have been designated the final step is to design the system. This may be done in a schematic way either on aerial photograph mosaics or on detailed topographic maps. Detailed design might be done in preparation for the letting of a particular project, but it would best be done well in advance.

Another element of thoroughfare planning which is done after the thoroughfare plan is made is to select the priorities, or the staging, of projects. The improvements indicated on most thoroughfare plans represent many millions of dollars, and obviously the thoroughfare system could not be built all at once. Rome wasn't built in a day and Greenville and Statesville won't be, either. Therefore this staging becomes very important. The point is to build toward a long range goal in a logical manner.

One of the most important advantages of the thoroughfare plan is that when a city has one, in at least the schematic design stage, it is possible for it to acquire right-of-way in advance. Anyone who has seen the subdivisions mushroming around the fringes of our cities will realize the obvious advantages of this. It is much, much cheaper to get right-of-way before buildings are on it than afterwards. It is also much less disruptive of the life of the community to avoid clearing rights-of-way. Right-of-way can be acquired gradually through such legal devices as purchase, condemnation, official map acts and slum clearance programs.

The acquisition of right-of-way in and around cities is one of the Highway Department's greatest headaches, and it is going to be necessary for the cities to do a good deal of this type of advance acquisition of right-of-way if their major thoroughfare systems are to be developed as planned.

As the thoroughfare planning process now operates in the State, the Highway Department will provide the planners and the transportation planning engineers to assist the municipalities in the development of these thoroughfare plans. If the municipality prefers to develop its own thoroughfare plan, it may submit it for

the planners' review and approval of the Highway Commission. Once a thoroughfare plan is mutually agreed upon and adopted the next step by law, is to negotiate an agreement as to which of the major thoroughfares will be the responsibility of the State Highway Commission, and under the same law they are to be the major streets necessary to move volumes of traffic from beyond the corporate limits through the municipalities and also to major business, industrial, governmental and institutionals destinations located inside the municipalities. These coordinated systems within the municipalities must by necessity connect to the coordinated system of highways being planned outside of the municipalities.

Long-Range Plan For Primary Roads

By J. H. Prince

The solution to the traffic problem on our numbered highways, in terms of their adequacy, must be based on a long range plan. First of all to serve the citizens adequately, it will be necessary to provide a coordinated system, and to do this it will be necessary that these highways be improved in stages over the years, so that each improvement fits together with the following improvement because there is never sufficient funds to make all of the improvements at one time.

Perhaps the best illustration of how to approach this problem in North Carolina is to follow the example of the Federal Bureau of Public Roads and Congress in terms of how they are attempting to solve the problem. As most of you know, some years ago an Interstate Highway System was set forth and in 1956 the routes were established and funds were set up on a needs basis without regard to arbitrary State apportionments. This extensive 41,000 mile system will be built over the next 15 to 20 years and it is already tied down with all States working to acquire the right-of-way. As you know, it will be built with full control of access, and designed to modern high speed standards, a minimum of four traffic lanes with dividing traffic medians with curves and grades held to a minimum. The Interstate System will connect over 90% of all cities with a population of 50,000 or more, 42 of the 48 State capitals, and all 48 states. Although this system amounts to only 1.2% of the total rural mileage in the nation, it is expected to carry over 20% of the traffic on all streets and Highways of this country. These figures give some idea of the importance of a well planned major traffic system.

Thus this same approach, which the Federal Government and many of the States have taken, is the only way to solve the problem and must be used in North Carolina. An arbitrary allocation of funds to various areas of the State will never solve this problem.



Prince

In staging the improvements of our major highways and in determing the priority for improvements many factors must be studied. Such factors as saving the existing highway and getting in where land is developing rapidly are very important factors for consideration in staging improvements. In many cases a new highway plan, or relocation, is required in order to make the construction feasible from a right-of-way stand point.

One of the first things that the Planning Department did was to analyze its entire system of Highways, based upon traffic and population potentials with a view towards developing its own Intra-State system or Trunk line system. After many months of study this system was finally delineated and approved by the Highway Commission. This trunk route system of highways for North Carolina was developed as a series of co-ordinated routes that connect the major population centers, serve the largest volume of rural traffic and have predominate growth characteristics. This co-ordinated system of highways consist essentially of four parts—The Interstate System, the trunk system, the truck feeder system, and rural collector system. The Interstate system of highways will connect many of the most important population centers in North Carolina, and in addition will carry the bulk of the through traffic in North Carolina. Because of its geographical location, the majority of the Interstate Routes in North Carolina are in a general North-South direction for that traffic that is moving from the North to the South. As North Carolina is a coastal state, only minor through traffic is expected in an East-West direction.

The second part of our major system is a network of our rural primary highways that connect the population centers together in a co-ordinated pattern and form the Intra-State system. The Intra-State system is a co-ordinated continuous net work of major routes connecting the centers of high economic importance as well as points of major population and in addition points of cultural and recreation importance, with connecting routes to similar centers in adjoining states. In general no concentrated area of population in this State should be more than approximately 25 miles from a trunk route.

Here I would like to point out some of the routes which make up this trunk system. We have US 17 from the Virginia line to the South Carolina State line. This route connects the more important towns in the Eastern part of North Carolina, such as Elizabeth City, Williamston, New Bern and Wilmington. The route serves to carry a moderate amount of through state traffic of a recreational and tourist nature.

US 117 from Wilson to Wilmington, this route serves to connect Wilmington to the Piedmont area and Interstate Route 95.

US 1 from Henderson to Sanford. This route serves to transfer certain amounts of traffic from Interstate 85 to the Raleigh area and by use of NC 150 to the Wilmington area.

US 15-501 from Durham to Sanford and US 1 from Sanford to South Carolina state line. In addition to connecting important areas of population, this route will have a moderate amount of through traffic because of this connection with Interstate Route 85 at Durham.

US 29 from the Virginia State line to Greensboro and US 220 from Greensboro south to Rockingham. This combined route south of Greensboro with its two prongs North of Greensboro fills a major void in the North-South movement.

US 52 from the Virginia line with a spur to Interstate Route 77 thence

southeasterly to Winston-Salem, High Point and to a junction with US 220 North of Asheboro. This route will serve to connect with Interstate 77 from the Canton-Cleveland, Ohio area to move large volumes of local and through traffic from the Virginia area to Winston-Salem and this route also forms a connection between Interstate Route 77 and Interstate Route 40.

US 321 from Boone to Gastonia and NC 27 from Lincolnton to Charlotte. This route connects Charlotte, and Gastonia with Lincolnton, Hickory, Lenoir and Boone, as well as providing a major connection between Interstate Route 85 and Interstate Route 40 at Hickory. In the extreme Western portion of the State we have UD 19-23 from Tennessee line to Asheville, US 25 from Hendersonville to South Carolina line. US 441 from Tennessee line to Georgia line; US 64 from Tennessee line to Murphy and US 19-US 19A and US23 to Waynesville with a junction to Interstate Route 40. US 74 from Interstate Route 85 to Interstate Route 26 will serve the industrial area of the Southwest such as Shelby, Forest City, Spindale and Rutherfordton. There is US 74, NC 211 and US 76 from Charlotte to Wilmington. Generally this route serves as an inter-city route with only very light volume of through traffic between Charlotte and Wilmington.

NC 49 from Charlotte to Asheboro and US 64 from Asheboro to Raleigh. This route connects the Charlotte area with Raleigh and will be used as an alternate facility for Interstate Route 85.

US 421 from the Tennessee line to Winston-Salem, serves traffic from the Bristol Tennessee area to Winston-Salem and the Piedmont Crescent area.

US 70 from Durham to Morehead City connects the Interstate routes from the West at Durham to Raleigh, Goldsboro, Kinston, New Bern and Morehead City area.

US 64 from Raleigh to Manteo serves an important connection for Raleigh, Zebulon, Nashville, Rocky Mount. Williamston, and Manteo and fills a major void in East-West traffic movement.

This trunk line system will be the backbone of the Highway system in North Carolina serving most all of the Urban areas with few exceptions. The third part of our major highway system is a secondary trunk line for connections to some of the less important areas in terms of traffic movements. The trunk feeder system or secondary trunk line system is a network of highways connecting centers of secondary economic and recreational importance, and smaller towns in addition to connecting these secondary centers to the trunk system, it also provides the major alternate connections between centers on the trunk system. The purpose of this system is to carry traffic as well as serve abutting property. In general no populated area of the State should be more than 10 to 15 miles from a Trunk Feeder Route.

The remaining numbered routes will form the Rural Collector System, which is the fourth part of our functional highway system. This system will connect centers of tertiary economic and recreational importance and populations concentrations under 2,000.

The purpose for delineating a functional highway system in North Carolina is to coordinate the attack on the problem of Highway congestion by placing available funds to the best possible advantage and finally tying down to this system an overall generalized plan for the State of North Carolina.

The Advanced Planning Division is now making a systematic review of our actual road conditions in order to determine the present and future needs of our trunk line system. From this detailed analysis it will be possible to determine the various sections of this system that will require improvements in order to maintain an adequate level of service based upon future traffic volumes. Certain sections will need to be completely relocated, other sections will possibly need to be widened on their existing alignment, some will have to be four lane divided highways in the very near future, and others probably can be two-lane highways with better alignment to provide for better movement in and around the Urban areas.

Priorities for improvements will be established upon the physical capacity of the highway to accommodate present and future traffic volumes.

These inadequate highways will be further analyzed and detailed cost estimates will be made on the sections that require improvements. The construction cost estimates will be compared with projected revenues in order to get an accurate picture of the long-range improvement plan for the entire system. There is every indication that the projected revenues will not be adequate for the construction program that is required.

In addition to establishing priorities for recommended highway improvement this study will determine the amount of additional expenditures that are required in order to provide an adequate highway system.

The development of a long range master highway plan for the State will provide a coordinated highway system that will have long-range permanent and produce a maximum return on every road tax dollar expended.

Level of Service: Controlling Factor In Highway Planning

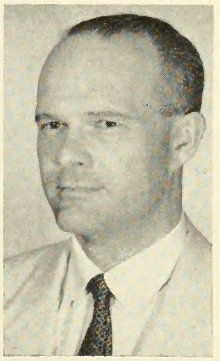
By R. J. Kimley

Level - of - Service on a highway is composed of two factors. First, the degree of comfort obtained while driving on the road. Second, the freedom of movement on that road; that is how fast can the traffic flow during the peak hour traffic periods.

Comfort of movement is related primarily to the alignment of the roadway; that is whether it is a level road with large flowing curves and few grade intersections or whether it is curvaceous, hilly and tortuous with a great degree of hazard due to conflicting traffic movement.

Comfort also relates to the condition of the pavement; is it smooth or is it in poor condition due to roughness and bumpiness?

Freedom of movement relates primarily to the driving speed considered reasonable and safe for the environment by the majority of drivers during the peak traffic periods. The planning engineers refer to this as operating speed and this term will probably be used quite a bit in later discussions.



Kimley

The ability to drive at a desired speed is dependent first upon the physical construction of the road and secondly upon the amount of traffic in the opposite direction. Physical construction takes into account horizontal and vertical alignment, width of the pavement, the intersections treatments; and the abutting property uses allowed.

Ability to pass the slowly moving vehicles depends on the design of the roadway by way of the built-in provision to see ahead far enough to pass; and this see-ahead ability is affected by curvature and alignment. On narrow pavements safety requires a slower speed when approaching traffic coming in the opposite direction and in passing a vehicle going in the same direction, than does a wider pavement. Grade intersections tends to cause a motorist to slow down if cross traffic is in evidence. A great number of intersectons thus could adversely affect the average speed of the highway particularly if stop signs or traffic signals exist in any great number. Elimination of frequent stops; of course, means a motorist can cover a given distance in less time which in effect increase the speed of the highway and helps him to maintain a desired speed. Abutting property uses create driveways which are in reality intersections. Commercial areas create more traffic than residential areas thus provide greater conflicting volumes of traffic. This forces the motorist to drive slower.

Traffic volumes in the opposing direction of flow prohibit safe passing and the most important factor in the ability to pass slow moving vehicles. On a two-lane road, if traffic is in the left hand lane you can't use that lane. If traffic volumes in the left lane are heavy enough such that the lane is blocked continuously, the ability to pass is reduced to zero and the slowest moving vehicles governs the speed of the entire traffic stream in that direction.

Trucks with their size width and slower speeds seriously effect the ability of the faster vehicles to pass slower moving vehicles on the highway.

In general then Level-of-Service takes into account quite a few factors all of which have an affect on the desirability of driving on the roadway. How, then, do we measure and begin to convert Level-of-Service into engineering terminology.

First, we must find out what Level-of-Service the people desire, that is, the unrestricted speed which the majority of the people desire to drive at. This has been done by making traffic speed observations. These observations were performed on a non-enforcement connected basis and with the speed measuring devices hidden from view of all traffic on the roadway. The driver had no idea that his speed was being clocked. Results of these measurements over a period of years show that on the average the free speed of the majority of the drivers has been increased gradually over a considerable number of years.

Observations of peak period traffic streams tend to point out the travel speed which the majority of the drivers become dissatisfied and attempt to pass the vehicle ahead of them. It has been found through casual observation that this speed varies by the type of urban or rural area, also by the speed limit that is posted in that area.

Observations have also shown that the speeds vary by the geographic region in the state. People are generally satisfied to travel at lower speeds in the mountains than in the piedmont and coastal region. Generally speaking, they travel faster in the coastal region than in the piedmont. This is probably due to differences in the alinement. The vertical and horizontal curvature allow a greater number of passing sight distance opportunities thereby creating higher desirable speeds.

On rural primary highways with speed limits posted 55-60 miles an hour, the results of the observations were found to be as follows: In coastal areas dissatisfaction was observed at speeds of 50 miles an hour; in the Piedmont areas dissatisfaction became evident at about the speeds of 45-50 miles an hour; in mountainous area dissatisfaction was not apparent until speeds as low as 40 were reached.

On rural secondary highways, that is paved secondary roads, coastal and piedmont were estimated to be about 45 miles an hour and the mountain about 40 miles an hour.

On urban highways all areas show dissatisfaction at about 25 miles per hour with greater tolerance for lower speeds in the business areas where speeds often drop drown as low as 15-20 miles per hour.

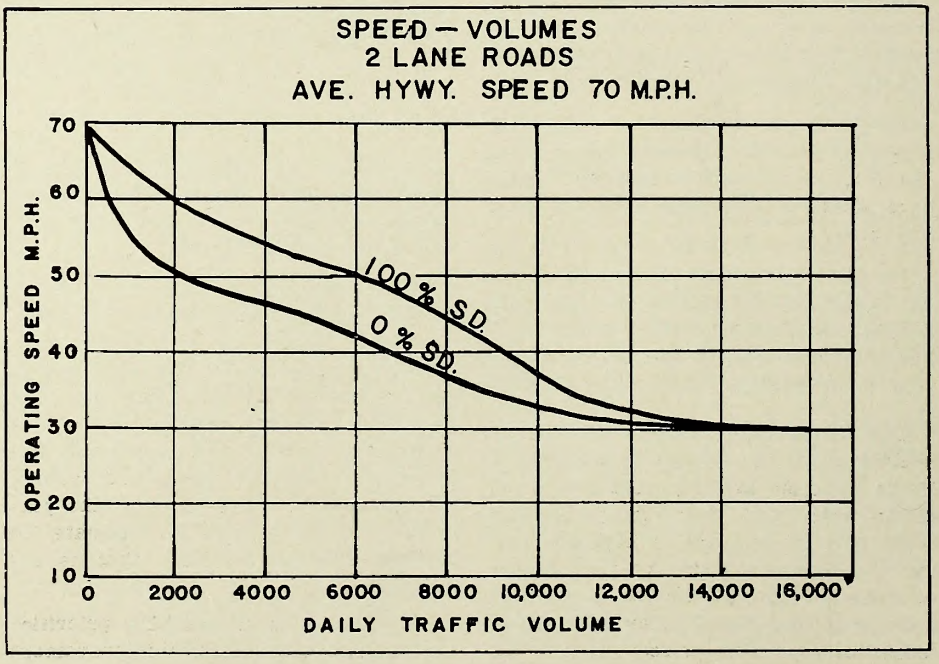
Now that we have seen what the public generally has decided in their own mind to be desirable speeds, how do their desires affect the type of rural highway needed.

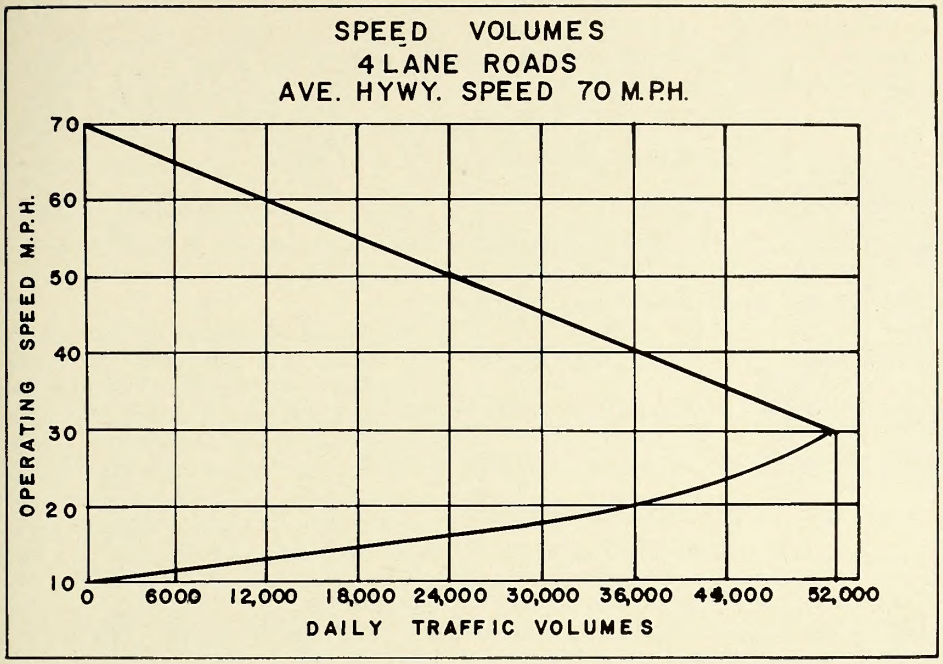
First, we will examine a two - lane roadway. The data from which the chart (Fig 1) was compiled was obtained from observation on actual roads in various parts of the country.

You will note at 70 miles an hour on the graph operating a desirable driving speeds on a two lane road may approach the actual design speed of the highway.

Note as the volumes increase on the right side of the graph that the corresponding travel speeds or Level-of-Service begin to decrease. Operating speeds as high 70 miles per hour can be obtained with light volumes and when volumes increase to 16,000 vehicles per day that the highest operating speed that can be obtained is about 30 miles per hour. Note that there are several lines, each indicating an amount of available sight distance. The 100% line indicates that 1500 foot passing distance is available through the entire length of roadway being considered.

Now note the effect of 0% passing sight distance. Insufficient passing sight distance due to poor alignment does not allow sufficient passing distances





anywhere on the section. Speeds fall off very rapidly and the volumes carried for a given speed are considerably less than what they were where passing is available. You will note where the curves for 0% sight distance and 100% sight distance intersect the speeds are almost equivalent. This is because passing becomes impossible when total 2 directional volumes are too high even where 100% passing sight distance was available. These curves converge at a speed of about 30 miles per hour at the highest volumes. The reason for this is that no vehicles can pass when the volume of the road is so heavy that traffic in the opposing direction prohibits passing.

On a four-lane road (Fig 2) we have a similar observation. The data was taken from observation on four-lane highways throughout the nation. You will note on this graph that as the volumes increase the operating speeds in turn decrease similar to the relationship of speeds and volumes on a two-lane highway.

You will notice a significant difference; however, on this graph over a two lane road graph in that its ability to carry traffic decreases in a straight line. You will remember that the curve for the two-lane road sort of zig-zags down as the higher volumes were approached. Note also that from 70 miles per hour down to 30 miles an hour the decrease is porportional with the volumes. This is because passing sight distance is not a problem on 4 lane roads.

Another very important fact is that both the two-lane road and this four-lane road carry their peak volumes at about 30 miles an hour. At volumes less that 30 miles per hour as traced by the bottom section of this four-lane graph, the volume begins to decrease as the speeds decrease. This indicates that for any speeds below 30 miles per hour a road carries corresponding lesser volumes than speeds at 30 miles per hour. Consequently a highly congested road traveling about 15 miles per hour only carries about 2/3 of the traffic it could carry was moving at 30 miles per hour. The maximum volumes can be carried at 30 miles per hour in all cases. For this reason careful speed zoning is obvious.

Trucks affect the travel speed rather drastically. The effect of the highway grade and grade lengths on truck speeds are rather significant. The longer and steeper the grade, the slower the truck speed.

Truck speeds decrease from about 40 miles per hour down to about 5 miles per hour and one truck can be the equivalent to about 60 passenger cars in the traffic stream.

In simple terms if the road has an ability to carry 100 vehicles per day and one of these vehicles is a truck, then the road can carry 1 truck and 40 vehicles—quite a severe reduction. Generally speaking then the overall effect of trucks on highways, with conditions that are adverse to high truck speeds, is to reduce the ability of the road to carry passenger cars at their desirable traffic speeds.

The width of traffic lane also tends to affect the feeling of security or safety of the driver when he travels along that roadway. Traffic lanes of less than 12 foot width grade gradually tends to reduce the desirable travel speed of the road.

Roadside development introduces slow moving traffic to the traffic stream thus creating potential points of collision or conflict. It also creates a certain amount of pedestrian traffic when this development is on both sides of the road. The normal driver when faced with hazards, real or implied, will reduce his speed.

The degree of development is expressed in terms of the percentage that each degree of development reduces the carrying ability of the road over the road with full access control.

If the access control features were removed and the major highway has a moderate amount of interference, the traffic carrying ability is about 70% of the roads ability to carry traffic compared with ability to carry traffic with full or partial or access control.

With heavy interference, that is shopping centers, strip commercial areas, etc., and a considerable number of cross roads, driveways, and pedestrians were in evidence, the road would only have ½ or 50% of the carrying ability it would have had, had it been a partial or full controll access road. Low speed limits usually accompany heavy development. So there is a very significant difference in the carrying ability and Level-of-Service of the road due to roadside development.

Turning movements also affect the carrying ability of the road significantly. First, let's consider what left turns do to a traffic stream. The amount of left-turn volume that can be accommodated partially depends on amount of opposing traffic running in the opposite direction to the left turning vehicle. Left turn movements adversely affect the through traffic because they slow or stop the traffic behind, if these left-turn vehicles are not removed from the traffic stream.

The amount of right-turn volumes that can be accommodated depend to a large degree on the amount of pedestrian interference and the turning speed with which the vehicles can negoiate their turns.

Right turns affect the through traffic

FIGURE 3

Lane widths			12-foot lanes				11-foot lanes			
PC speed at low volume (Average highway speed)			70	60	55	50	70	60	55	50
Percentage of highway with passing sight distance	Sight dist. 1500'	Sight dist. 1000'	Average Annual Volume							
	Percent									
	100	100	6500	6500	6050	5150	5600	5600	5200	4450
	80	87	6200	5850	5250	4600	5350	5050	4500	3950
	60	76	5850	5050	4400	3650	5050	4350	3800	3150
	40	64	5250	4200	3550	2550	4500	3600	3050	2200
	20	52	4500	3400	2550	1800	3850	2950	2200	1550
	0	40	3450	2550	1850	1150	3000	2200	1600	1000

less than left turns. They tend to slow down the through traffic and if the speeds are below 30 MPH the carrying ability is reduced.

These are but a few of the over-all factors that affect the carrying ability of the road. The combination of some of these effects are shown here. (Fig 3) reveals the traffic volume the highway can carry for any particular given Level-of-Service. Note that on a 2 lane road with 12 foot lanes and a 70 mile per hour safe driving speed with little or no interference and 100% passing sight distance 6500 vehicles a day can be carried. Also note, that on the same road but with 0% passing sight distance that only 3450 vehicles a day can be carried without altering the operating speed or Level-of-Service that road is to provide.

Note the effect of lane width also. On a road with a 70 MPH safe driving speed as above with 100% sight distance but with lanes 11 feet wide (22 foot pavement width) only 5000 can be carried, a reduction of about 15% in capacity.

Generally speaking then the number of cars that could be carried at a given speed is in engineering terminology called "Practical Capacity". You have probably heard this term time and time again.

So much for rural sections of road; now let's look at urban street capacities and the factors that affect their carrying ability.

Factors affecting traffic flow on urban streets are much the same as the factors affecting traffic flow in rural areas. We have intersections, cross streets, the type of traffic control, such as stops signs, and signals. Lane width grades and curvature, number of trucks, turning movements and the number of vehicles conflicts. We also have two new items here that affect capacity—parking and pedestrians.

A traffic signal prevents traffic movement about 50% of the time; that is it's red about half the time and green about half the time. Thus the ability to carry traffic is only about 50% of the ability if no signal were present and free flow conditions prevailed.

Travel time increases because of these forced stops and delays and the average speeds drop severely if the driver is constantly confronted with red traffic lights.

Lane widths, grades, curvature, trucks and turning movements effects are similar to the effects of similar movements on rural roads.

The parking, occupies street space that could have been used for traffic thus effectively reducing the over-all usable width of the pavement and the number of lanes available.

Parking and unparking maneuvers interfere with through traffic lanes thus requiring stops and slow downs reducing the carrying ability of the adjacent carrying lanes to carry traffic.

Stop signs are similar to signals in their effect on capacity. Stop signs reduce capacity in that every vehicle approaching the intersection by necessity must stop.

This capacity of course depends on the amount of traffic on the crossing through street. If this traffic is light, the stop will only be momentary; in many cases the delay would be much less than would be necessary with a traffic signal if the cross street is not too high in volume.

Well, let's summarize the Level-of-Service idea and its traffic volume relationship.

The travel speed and comfort attainable on the road establishes the Level-of-Service on a highway. In selecting the speeds the public desires, we automatically establish the maximum volume of traffic that can be allowed on that road before improvements are required; in other words the desirable speed establishes the number of vehicles the public is willing to put up with before they consider the road congested. How do desirable speeds compare from area to area: in coastal areas, 50 MPH is the existing speed. We suggest for new construction that this speed be raised to 55 MPH.

In mountainous areas the valley alignments are 50 MPH on existing roads. We suggest that new construction be 55 MPH in the route. Other mountain alignments are 45 MPH existing on trunk routes and it is suggested that 50 MPH be provided on new construction.

Understanding the Level-of-Service-traffic volume relationships, we can now readily test the adequacy of the existing highways. First step in this determination is the inventorying of the roads as they exist according to their physical design features, such that we can determine the safe travel speed that a vehicle can travel at the passing sight distance that is available on that section of roadway.

When the inventory is complete it is a simple matter to compare the existing amount of volume on the road with the available sight distance and safe speed of the highway to derive a speed that the peak hour traffic travels at on the roads. Following are some examples that might be encountered across the state.

1. A road with torturous mountain alignment on which speeds can not be traveled any faster than 35 MPH safely, is over capacity at any volume since the Level-of-Service is 45 MPH.

2. A level straight 2-lane highway with 70 MPH safe driving speed carrying 2,000 vehicles per day is flowing freely and has a peak hour speed as high as 57 MPH well above the Level-of-Service standard as established per that type of road 50 MPH. The same road carrying 9200 vehicles per day is over capacity and since the vehicles can traveling only 40 miles per hour due to traffic volume restrictions.

3. Another road in the mountainous areas might be torturous and with a safe driving speed of 40 MPH but with no passing sight distance. This road carrys 2,000 vehicles per day but by the Level-of-Service standard adopted for that area 40 MPH. Here are two roads carrying the same volume of traffic at different safe design speeds, one 70 MPH and one of 40MPH; but with the 40 MPH road having a peak speed of 36 while the 70 MPH one has a speed of 55 with the same volume of traffic.

By comparing all the important highways of the State by this method the needs of the State Highway system can be readily be determined.

The Advance Planning Department is in the process of determining a State wide program based on these procedures at this time.

Photogrammetry And Electronic Computers

By R. W. McGowan

In this day of modern highway construction, the most up-to-date tools are needed to accomplish the best end result. We are now in the era of planning and constructing the Interstate network of controlled access highways. When the highway users become accustomed to driving this type of road with the many built in safety features, the demand will arise for more of this type planning for the primary system throughout the state and nation. We have already gone beyond the survey party establishing a location for this type of highway with no more information than can be obtained from ground reconnaissance, county maps and other limited information. The design engineers need more than one established center line, limited cross-sections, a desk calculator and a planimeter to arrive at the best possible design at the most economical level. Two strides that have been made in this direction are the tools that we will look at now.



McGowan

First, let us look at Photogrammetry. This science is not new but has been with us for a number of years. The widespread use of Photogrammetry in highway design and location is relatively new in the past few years. It consists of many facets and uses, among which are descriptive photographs, uncontrolled and controlled mosaics, planimetric mapping, contour mapping and many other types of photographs. These furnish the locating engineer and the design engineer with a wide and varied number of aids in laying out the best product obtainable within the design standards and other limitations. A designer skilled in the art of photo interpretation and with the aid of stereoscopic instruments can review and study descriptive photography and establish a corridor to begin to plan a location and later plan a highway that will conform to modern concepts of a primary or trunk line highway. The designer has before him miles of photography both lengthwise and wide. He can see every house, every road, every stream or river, every piece of cleared land, every area of woods, all lakes, ponds, towns, communities; in fact, everything that will show up on a photograph and that covers about everything which is not covered up. The majority of you have at some time flown in some type of aircraft one or more times. I am sure that you were very much impressed with the almost unlimited view of the landscape below you on your first or first few flights. What you saw and probably marvelled at is exactly what the highway design engineer has before him when he spreads out the photographs to work on establishing this corridor.

With a working corridor established we move to the second phase of this operation. The area from beginning of project to end of project is then flown again at a predetermined height above the mean ground level, at a predetermined airspeed and photographed again at such width as is desired by making several runs along the flight line. Then a very accurate system of ground control is run on the ground with precision surveying instruments and equipment to establish a relationship between this photography and the coordinate grid system or known and established landmarks also to establish known elevation points that can be identified on the photographs. With all pictures developed and plates made, the models are then turned over to the Kelsh plotter operators to plot out the preliminary manuscripts to prepare a contour map to such scale and contour interval as is predetermined by the design engineer before photographing the area. This work is checked against the ground control survey for accuracy. With this type map, we not only have all the information mentioned before in the descriptive photography but on a much larger scale. Added to this, we have the ground elevations and contour lines throughout the areas showing all hills, mountains, valleys, ground slopes and all smooth or irregular ground shapes. With this information, the design engineer can establish one or many center lines with ground profiles, laying these lines in to best conform to design standards for both horizontal and vertical alignment. Consideration is given to determining the proper location for road crossings and stream crossings. A careful analysis can be made to minimize property damage by keeping these projected lines away from as many houses and buildings as possible, following along or near property lines to cut down on residues of land away from the main property, following through as many wooded areas as possible to stay away from cultivated land. All of these things are given consideration as long as the desired design standards can be obtained. When the center line or lines are established and profiles plotted and grades laid, he is then ready to determine the volume of work to be done in grading the project.

Cross-sections are then taken from the contours by means of accurate scaling and interpolation. With this information, he then goes to the electronic computer section and this information is keypunched on IBM cards and run through the 650 digital computer by applying the proper program information for grade profile, earthwork computation and slope determination. The printed information obtained from this section tells the designer the volume of materials to be moved, location by station of the material and whether or not reasonable balances can be established.

With this information, the designer can readily tell whether the line or lines he

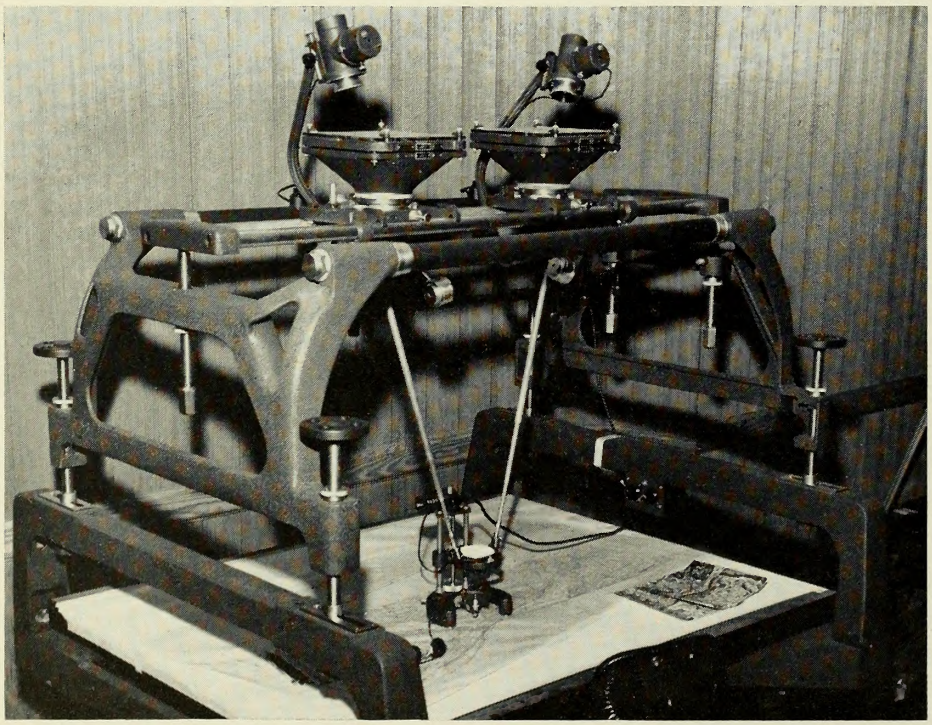
has established are within the limits of economy for the type of road that is being planned. He can determine from the accumulated information before him which of the lines or combination of lines is the most economical on which to construct a project. With contour maps developed to a scale of 100 ft. to the inch and with a contour interval of two ft., the information shown on this type map is accurate enough and in sufficient detail to prepare completed plans for letting projects to contract. The projected center lines can be readily identified so that any portion of it can be staked out for complete investigation by the Hydographic Department to obtain all information needed for stream crossing and highway separations. With the property lines correctly identified, the width of the right of way shown, the construction limits established, profiles plotted and grade lines laid, the Right-of-Way Department can take this information and acquire the necessary right of way. The Right of Way Department will have sufficient information to estimate the right of way costs on all preliminary lines prior to adoption of the final line for construction of the project. Photogrammetry, when properly applied, can furnish all the basic information required for the planning and design of today's modern highways either for preliminary work or contract plans.

The plane we have is a twin-engine aero-commander high wing monoplane. It is a safe, stable and efficient plane. The aerial camera is a Wild RC 8, distortion free camera. This is a precision instrument for producing a very high quality of work.

We have four Kelsh plotters for plotting contour maps. With trained operators, these instruments can produce from three to four square miles of contour mapping in an eight hour day.

The main function of the rectifier is enlarging and removing the air tilt from photography. That is, if the plane is not level when the pictures are snapped, this instrument makes that correction.

The Copy Camera is a very versatile piece of equipment. A well-trained operator can do many jobs for the various departments of the Commission that are not known to the various people as of now. It is a precision instrument working on a calibrated track that can be used to take photographs and reproduce work to almost any desired scale within the limits of the camera and vacuum frame. It can be used to reproduce mosaics, reduce maps or drawings to almost any scale and maintain accuracy. The enlarging capacity is four times the original and the reduction capacity is five times the original. This machine can be used to produce black line linens, produce the negative for the state highway map and the negatives for the county maps.



One of four Kelsh plotters used for plotting contour maps in the new Photogrammetry Department.

There are many other smaller pieces of equipment along with the developers and map drafting room.

The Electronic Computer as a tool for the highway designer is relatively new to our era. This type of computation for engineering problems was first explored a little more than three years ago. Considering the progress and rapid strides already accomplished in this field, the limits of its use in the future could possibly go beyond the average comprehension. There are many areas of long and tedious computations that have been bypassed by the engineer due to lack of time; so many short cuts were devised which produced only partial accuracy. Through the development of adequate program information, many areas of computations are opened up to the engineer that would have taken hours or days to work out which now can be done in minutes by using computer methods. The computer manufacturers are constantly working to improve their machines. The many highway departments, and most all of them have some type of computer, are developing programs for computing the different phases of engineering computations. This type information is interchangeable among the different states. Engineering schools are now teaching computer mathematics and computer programming. Judging by the progress made in such a short time, it would probably be safe to assume the most lengthy mathematical problems will soon be geared to the electronic computer.

The printed sheets showing earthwork computation, slope stake information and other data are becoming familiar to all of you that are connected with design or construction. This data is available to you in a condensed form and not spread out over many cross-section sheets. Many field engineers have readily admitted that due to the weight,bulky volume and inconvenience, the cross-section included in a large grading project were virtually ignored. Final estimate quantities are ready to be prepared in the computer center. This operation in itself will permit the field forces to devote more of their time to the construction project rather than to office work computing quantities.

There are many problems that are being computed on the 650, and the design engineers are the only ones who are familiar with them. Many bridge problems that require many hours of

computation are run through the computer and the results tabulated in a relatively short time. Many preliminary design problems such as traverse closure, grade profile as well as earthwork volumes are adapted to the computer operation.

In closing—let me say that the highway engineer with the foresight to recognize the trend in changing and updating the methods and procedures of engineering computations can readily see that the use of photogrammetry and electronic computers as tools in highway planning and design are not passing fancies but are here to stay, and their use will be expanded in the immediate future and will not pass away.

Design Standards, Interchange Types

By W. A. Wilson, Jr.

Just what are some of the other tools that a highway planner needs to develop a facility?

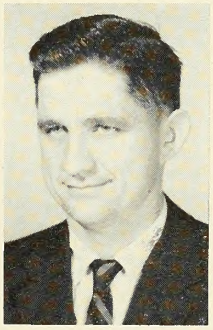
Given the design speed, estimated traffic, estimated turning movements, type of access control, and level of service to provide; the planner has the main tools for his use as a planner.

Design speed is defined as the maximum safe speed that can be maintained over a specific section of highway when conditions are so favorable that the geometric design features of the highway govern. An adequate geometric design is the corner stone of a safe highway.

With the design speed, the planner can determine; the maximum degree of curvature to be used, the maximum grades to use, the critical length of grade for design, the superlevation required, the stopping or passing sight distance required. On a two-lane facility, passing sight distance is to be provided where feasible. 1500 feet to 2000 feet of sight distance is to be required on the entire length of the facility, and on a four-lane facility only stopping sight distance is required.

With the design speed of the facility set, this also sets design features of the interchanges. The design speed of the facility determines the design speeds of the ramps, which in turn determines the minimum length of deceleration lanes, the minimum length of acceleration lanes, and other design features as were determined by design speed on the facility itself.

With the estimated traffic, turning movements, type of access; that is, full control, partial control, or no control, and the level of service desired for the facility, the planner can determine; the number of lanes to build, the width of the lanes, width to provide on the shoulder, if climbing lanes are required, width of median to provide; also, if railroad grade crossings are to be allowed, if at-grade intersections are to be permitted, the capacity of the intersections, if grade separations and interchanges are required, and the spacing of interchanges and access points on the facility. Some of these design features will also have to consider design speed.



Wilson

Type of control of access is very important to the planner. If the facility is to be full control, he knows that all the intersecting roads will be separated, terminated, rerouted, allowed right-turn entrance or exit, or provided with an interchange. His chief concern is the continuous flow on the major road. Sometimes access and interchange will have to be provided to some of the roads even though, if considered as an isolated case, an at-grade intersection would work with possible traffic signal at a later date.

In partial control or in no control, he knows that he will have mostly at-grade intersections and a few interchanges.

I would like to discuss some of the types of interchanges the planner would consider in the development of the proposed facility, and why he will make certain selections for different conditions.

Interchanges are practical for all types of intersecting highways and for any range of design speeds. It promotes safety and maximum traffic capacities on the intersecting highway. Crossing conflicts are completely eliminated and turning conflicts are minimized depending upon the type and degree of development of the particular interchange.

In the design of interchanges, joint consideration of type and volume of traffic, topography, available right-of-way, and cost determine the type selected. Although each interchange presents an individual problem, it must be considered in conjunction with adjacent interchanges or at-grade intersections on the project as a whole. If the interchange or at-grade intersection breaks down, the whole facility breaks down.

Design patterns for interchanges vary with each interchange; a design suitable for one interchange is rarely adaptable to the traffic and topographic conditions of another site.

There are interchange designs, however, which have definite patterns that can be used under certain conditions.

Through common usages these have been called: Diamond, Clover-leaf, which includes 2-quadrant clover-leaf and the full clover-leaf with a collector distributor road, and Directional Interchanges, which includes "Y" intersections, Trumpet Type, and multilevel designs.

A Diamond Interchange has four one-way ramps. This provides for all eight turning movements. Each ramp provides for one right turn and one left turn on the minor road. Therefore, it is essential that the maximum attainable intervisibility between vehicles approaching the ramp intersecting the minor road be provided. Traffic on the minor road is small, speeds are not high and there is very little interchange from one facility to the other.

A Partial Clover-leaf has one or more loops which eliminates some of the left-turn movement on the Minor road. It is suitable for locations where the traffic patterns are such that the remaining left-turn conflicts on the Minor road can be tolerated. The traffic on the Minor road is heavier and there is more interchange from one facility to the other than is usually found at a Diamond Interchange.

A full Clover-leaf interchange is suitable where left-turns and cross traffic volumes require elimination of all left-turn conflicts. This condition usually exists where two major facilities intersect, with high speeds and heavy volumes. It could be used as long as the volumes on the facilities did not exceed 60 to 75 percent of their capacity.

Take an intersection of two major roads with high design speeds and heavy turning movements in all quadrants. The solution would be a full Clover-leaf. Now, the Clover-leaf has some disadvantages, and one is the weaving sec-

tion between the loops. This is where the low speed vehicle from the loop ramp must merge with the high speed vehicle of the facility, or where the high speed vehicle of the facility must weave with the low speed vehicle from the loop ramp in order to get off the high speed facility. If this weaving and merging condition is a problem due to traffic volumes, we go to a Clover-leaf with a Collector Distributor Road.

A Collector Distributor Road is essentially a weaving section physically separated from the through lanes of the main facility so that the weaving can take place at lower speeds and not interfere with the through traffic.

This type design allows for a the turning vehicles to leave the high speed facility at high speeds and will minimize signing difficulties in the interchange area.

The name, Directional Interchange, applies when ramps for one or more left-turning movements are on directional alignment. This condition exists when two major facilities intersect with very heavy turning volumes and with heavier turning movement in certain directions or all directions.

With this information about the design standards and different types of interchanges in mind, the planner now needs to know what can be done and what must be done at the at-grade intersections on the facility, in order to plan a safe and economical highway which will provide the best level of service for the particular area involved.

Part II

By Harold C. Rhudy

Highway planning should be a broad process, concerned with long rather than short range effects. The development of a particular area suffers if the planning effort is dissipated on single purpose programs. The highway planner should not be confined to specific areas, aspects, or programs.

Highway planning of necessity involves transportation considerations, and specific transportation planning requires a comprehensive approach by all personnel connected with the ultimate construction and operation of the highway. The purpose of constructing a highway is not merely to provide a roadway with longevity that is easy to maintain. The purpose is to provide a roadway over which traffic can operate safely, efficiently, and economically.

As previously pointed out, the design speed and projected traffic volumes for a proposed project determine curvature, gradients, sight distance, number of lanes, etc. These factors and the desired level of service control the type of intersections, whether they are to be at grade intersections or grade separation interchanges.

A highway intersection serves to permit the interchange of vehicular traffic from one facility to another facility. Generally the intersection is the most critical part of the highway. If improperly planned, designed, or constructed it limits the traffic carrying capacity of the highway and it is the site of the majority of accidents.



Rhudy

When the decision has been made that the intersections on a facility will take place at grade this is usually along a section of highway with slightly lower design speeds, lower crossing conflicts, lower level of service, etc.

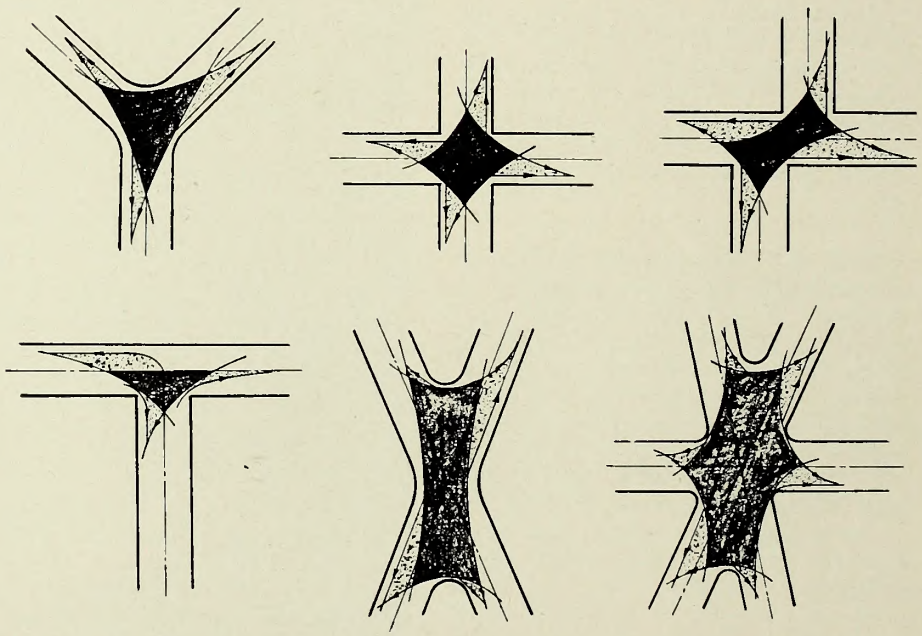
Engineer's View vs. Driver's View

We engineers must fully realize that we look at an intersection in a plan view while the driver looks at it at a very flat angle. What to us may be a very simple intersection layout, may be to the driver a very difficult and confusing maze of wandering roadways and stumbling blocks.

Intersection Accident Exposure

Basic crossing conflicts can be safely provided for by the use of traffic signalization or by stop sign control, depending upon traffic volumes, accident experience or potential, etc.

In order to understand the need for a clear and definite treatment in the intersection we should consider the intersection areas of conflict. In a simple crossroad intersection of two, two-way roads there are 24 conflict points, five of which are caused by left turning vehicles. The total number of conflict points varies with the number of approaches to the intersection and with the type of roadway use, whether one-way or two-way traffic. These points of conflict are further emphasized when we consider wide-throated intersections where the motorist is permitted to wander through any conceivable movement. The areas within the intersection where the major conflicts in traffic flow take place are called accident exposure areas. These accident exposure areas are the smallest in the simple "Tee" intersection, but increase in size as we go to a simple crossroad, a "Y" intersection, an offset intersection, and acute angle crossroad, and to a multiple approach intersection.



LEGEND: MAJOR CONFLICT ■ MINOR CONFLICT ▒

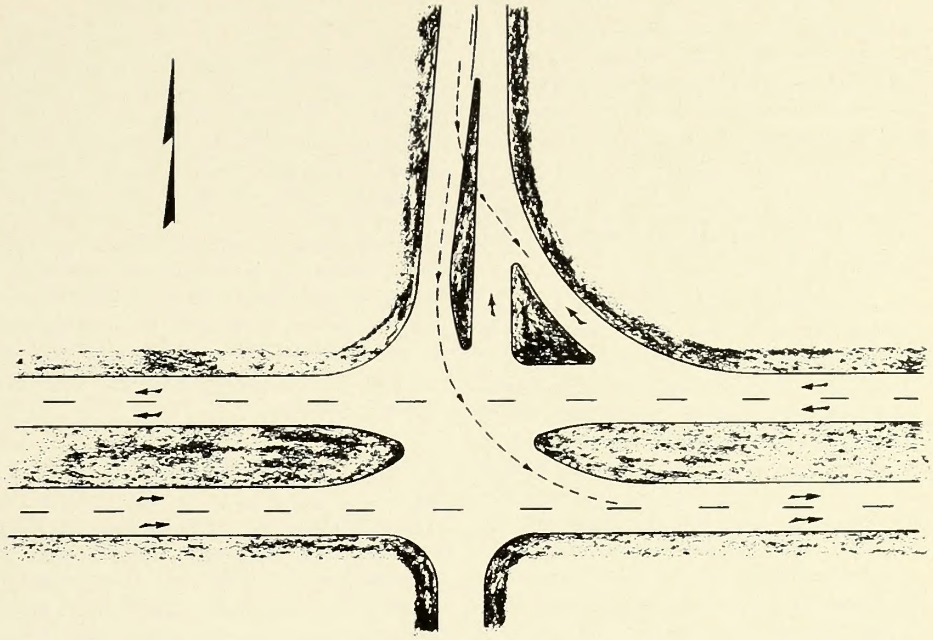
INTERSECTION AREAS OF CONFLICT

Angle of Approach to the Intersection

The angle of approach to an intersection is a very important planning consideration. The alignment of intersecting roads should permit the motorist to readily recognize and easily maneuver through the intersection with safety and a minimum of interference between vehicles.

At many places topographic conditions establish definite alignment and grade limitations on the intersecting roads. Regardless of the type of intersection, it is desirable for safety and economy that intersecting roads meet at or nearly at right angles. Roads intersecting at acute angles require tight turns or extensive turning roadways and tend to limit visibility. The intersection angle should permit through traffic to be seen readily.

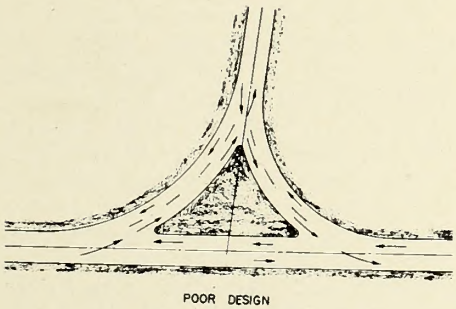
The practice of realigning roads intersecting at an acute angle has proven beneficial. The curves introduced, however, should permit safe speeds not much below that on the approaches, or they may prove to be as great a hazard as the acute angle crossing itself.



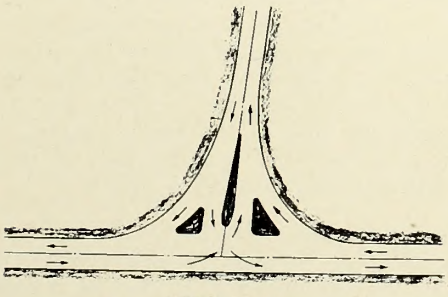
CHANNELIZATION REDUCES NUMBER OF DECISIONS AND HELPS PREVENT INCORRECT DECISIONS

Why Do We Channelize

Channelization is the design of traffic lanes and traffic islands in a manner to guide traffic into proper paths through the intersection area. Channelization is particularly useful at intersections with large areas, normally occupying neutral or little used space, preventing undersirable vehicular wandering and maneuvering. Channelizing islands reduce the possible points of conflict between streams of traffic; they establish desired angles of crossing or converging streams of traffic; they are useful at locations where it is necessary to change the direction of traffic flow and often they provide convenient locations for necessary traffic control devices. Also, channelizing islands, properly designed, prevent the motorist from making incorrect decisions and attempt to reduce the number of decisions that the motorist must make at one time.



POOR DESIGN



BETTER DESIGN

Acceleration and Deceleration Lanes

Drivers leaving a highway at an intersection, either at grade or grade separation intersection, usually are required to reduce speed before turning. Drivers entering a highway from a turning road accelerate until the desired speed is reached. When deceleration or acceleration by leaving or entering traffic takes place directly on the highway traveled way, it disrupts the flow of through traffic, and often is hazardous. To minimize these undersirable aspects of operation speed change lanes gradually have come into use on main highways and at special locations with restricted sight distance and heavy turning movements.

A speed change lane should be of sufficient width and length to enable a driver to maneuver his vehicle onto it properly and, once on it, to make the necessary change in speed onto or off of the main highway. The failure of following drivers to brake due to inattention is the cause of many rear-end collisions where deceleration must take place on the main traveled way.

Many factors are considered when determining the warrants for the use of speed change lanes, namely: speed, traffic volumes, capacity, type of highway and service provided, accident experience, etc. Deceleration lanes which also function as left turn storage lanes in the median reduce hazard and increase capacity. If a left turn storage lane is to be placed in the median of a divided highway, the minimum required width of median is 16 feet.

Medians and Median Openings

The background of favorable experience in the use of medians has resulted in the overwhelming acceptance of the separation of opposing lanes as an essential feature on a multilane highway. Nearly all modern highways planned for four or more lanes in the ultimate stage are being designed with a median. Medians on rural highways preferably should be of sufficient width to provide the desired freedom from interference of opposing traffic, to minimize headlight glare, to include space for crossing and turning vehicles at intersections at grade, and to provide a haven in case of emergency.

The general range of median widths is from a minimum of 4 feet to a desirable dimension of 40 feet or more to assure

all the feasible advantages. Narrow medians should be curbed to provide a more positive separation. The physical and psychological separation from opposing traffic is best obtained when medians are 25 feet or wider.

The principal advantages of dividing the multilane highway are increased safety, increased capacity, comfort, and ease of operation.

The location and number of median openings along a section of highway is another primary highway planning consideration. Each additional crossover placed in the median over and above those required for maintenance and enforcement increases the accident potential, decreases the vehicular capacity, and decreases the comfort and ease of operation. If crossovers were permitted every few 100 feet we could expect future cross streets with signal control to develop throughout the section.

An analysis of the policy adopted by the Commission dated August 7, 1959, reveals that there will be no more crossovers opened up in existing facilities if the policy is strickly adhered to. In order to provide additional new crossovers it will be necessary to develop and design a crossover plan for the entire highway section in the vicinity of the new demand.

Traffic Signals

In general, traffic control signals should only be installed and operated when abnormal vehicular or pedestrian delay is created by the physical inability of traffic to flow smoothly through an intersection. The safety aspect alone should seldom be the decisive factor. With signal operation, accidents seldom are eliminated entirely, but continue to be a matter of serious concern. This is attested to by numerous studies which show there are sometimes increases in accident frequency following installation of signals.

The function of a traffic signal is to assign right of way between opposing streams of traffic. With an entering traffic volume from all approaches of less than 8,000 A. D. T. at an intersection of two two-way roads in a rural area, there are usually sufficient time-space gaps in the through traffic stream to permit easy access by the side road traffic. In many cases, it has been found that a properly channelized intersection with increased approach capacity will operate with a higher degree of efficiency and safety with higher traffic volumes than will an intersection without channelization, with traffic signal control.

Signing and Marking

Signing and pavement marking of the highway are directly related to the design of the highway and are features of traffic control and operation which the highway planner must consider in the geometric layout of the highway.

Although safety and efficiency of operation depend to a considerable degree on the geometric design of the highway, the physical layout must also be supplemented by effective signing and marking as a means of informing, warning, and controlling traffic.

Conclusion

An established engineering practice dictates that highway plans must be field-checked to pick up oversights or blunders in drainage, grade and other factors of design. If the purpose of a highway is to provide a roadway over which traffic can operate safely, efficiently, and economically, the plans must also be field-checked for oversights or defects affecting the safe, efficient operation. Can children cross the highway to get to school? Can residents get to a shopping area? Is the exit ramp going to catch the motorist by surprise due to topography? Can the highway be effectively signed and are the proper traffic and operation features provided?

In The Urban Area:

Making The Best Use Of What We Have

By Billy Rose

The problem of congestion on the streets and highways within our urban areas is not new. The rapid growth in the use of the automobile, which has been accompanied by the trend toward urbanization, has made significant contributions to the urban congestion and has brought the attention to more and more people the inadequacy of our urban street systems. This inadequacy stems from both from the lack of planning for new street facilities and the inefficient operation of the existing street facilities.

Streets are dedicated as public ways for the movement of traffic; therefore, the primary function of the urban street system is the movement of traffic. The system has many secondary functions, such as the provision of accessibility to the abutting property, which may be of great importance in certain situations. The design of the system has a great influence on the economic potential and "liveability" of the urban area as well as the efficiency at which the area functions.

The basic forms of the street systems found in our urban areas may be classified according to one of four categories (1) gridiron, (2) radial-circumferential, (3) expressway and (4) random. The various streets systems function quite differently with a resulting difference in the pattern and magnitude of traffic movement and land development.

The major portion of the existing street systems was designed to accommodate the living patterns of 30-40 years ago or, in some cases, even longer. Thus, in many instances we find it very difficult problem to provide a minimum level-of-service which is desirable and demanded by our present standard of living. The cost of new facilities is high, and in most instances new facilities may be classified as relatively long term propositions since they require much time for planning, design and construction. The cost of extensively redeveloping inadequate existing facilities is also very high. In addition, the redevelopment of existing facilities usually disrupt the normal traffic pattern and may affect local business. Thus, it is necessary to obtain efficient traffic operations from the existing street facilities, because of economic and level-of-service reasons.

Efficient traffic operations may be attained most economically through the coordination of land use planning, throughfare planning and the use of traffic control methods. Land-use planning and thoroughfare planning are principally concerned with the future development of the urban area, thus they may be classified as the long term programs. The traffic control methods are concerned primarily with the existing conditions and may be termed as the short term program. The traffic control methods can often be instituted during a relatively short time period and have an immediate effect on traffic operations. Land use and thoroughfare planning were discussed in somewhat detail at the session yesterday so lets now take a closer look at the various traffic control methods.

The effective operation of the existing streets and highway facilities involves; (1) the application of control measures

authorized by law, (2) the installation of traffic control devices, and (3) localized structural changes in the streets and highways.

Traffic Control Measures

Traffic control measures usually involve the establishment of through streets, speed control, turning regulations, one-way streets, unbalanced flow regulations, parking regulations and the routing of certain classes of traffic. These measures usually require no financial outlay other than a relatively small cost of signs, pavement marking, etc., however, they establish the basis criteria for the safe and efficient use of streets and highways.

Through Streets

The most common example of the traffic control measure is the stop regulation. This regulation may be applied to all cross streets along a designated route or to individual intersections. The legal restriction imposed by such stop regulation usually requires the vehicle to come to a full and complete stop before entering or crossing the designated through route. The use of the stop regulation materially increases the ease of movement and capacity of the designated through route.

Speed Control

Speed control is necessary to establish a reasonable speed which does not endanger the safety of persons or property. Proper speed control calls for investigation into and evaluation of accident records, speed studies, adjacent land development, measurement of physical and condition of the street, etc.

Some of the more common types of locations where speed zones is generally found to be advisable are through business areas, abutting major streets, school churches and sections of roadways that are under construction. the most basic general requirement for speed zoning is that there be uniformity in speed control. This is necessary both for the motorist acceptance and for practical enforcement.

Turning Movement Regulation

Restrictions of certain turning movement at urban intersections both increase the capacity through greater operational efficiency but also increase the safety through the reduction of vehicle and pedestrain conflicts. The effective use of such regulations requires the use of: vehicle and pedestrain traffic movement date, accident data, physical characteristics in street facilities, and the determination of the amount of diversion in terms of time and distance which result from the use of the turning restrictions. It is necessary for the turn regulations to be complimented by the use of adequate signs, signals, channelization and lane markings. In general, the use of turning regulations is most effective during peak traffic periods and in areas where there are high volumes of both vehiclar and pedestrain traffic.

One-Way Streets

One-way streets may be used to increase the operational efficiency of the street system through the provision of additional capacity and increased safety. The operational efficiency is increased through a better signalization sequence by the allowance of higher operating speeds, by the reduction of traffic flow conflict at intersections, and by the use of an odd number of traffic lanes which would be impractical and hazardous with two-way operations. One-way streets increase safety through the reduction of the number of traffic flow conflicts and a reduction in the effect of conflicts due to parking operations. Pedestrain movement may be made with greater safety as the pedestrain has to watch traffic from one direction only.

The use of one-way regulations requires complete vehiclar and pedestrain traffic movement data and physical characteristics of the street and roadside development. There must be available parallel streets for use as one-way pairs with frequent connecting cross-streets. The overall street pattern must be such that it will not require a large increase travel time and distance to reach the desired destination. The one-way system can be very effective when it is used as a boundary to areas where special events attract abnormal traffic volumes.

There are several disadvantages to the one-way system. It usually requires additional travel distance although not necessarily an increase travel time. It requires additional sign control at all intersections, and it requires a substantial length of time usually 60 to 90 days for the general public to become throughly acquainted with the use of the one-way system.

Unbalanced Flow Regulations

Unbalanced flow regulation is rapidly coming into use where it is necessary to increase the capacity of the street system during peak hours and where a highly unblanced flow condition exist. This type regulation permits the use of more than one-half of the lanes for traffic in one direction. Take as an example a six-lane street which is normally operated with three lanes in each direction. With a directional distribution of traffic approximately two-to-one, four lanes could be operated inbound and two lanes outbound during the morning peak period and then reversed during the evening peak period so that two lanes are inbound and four lanes outbound. During the off-peak periods the street could be operated in a normal manner with three lanes in each direction. It is essential that the unbalanced movement be protected by control devices, physical barriers, and general regulations.

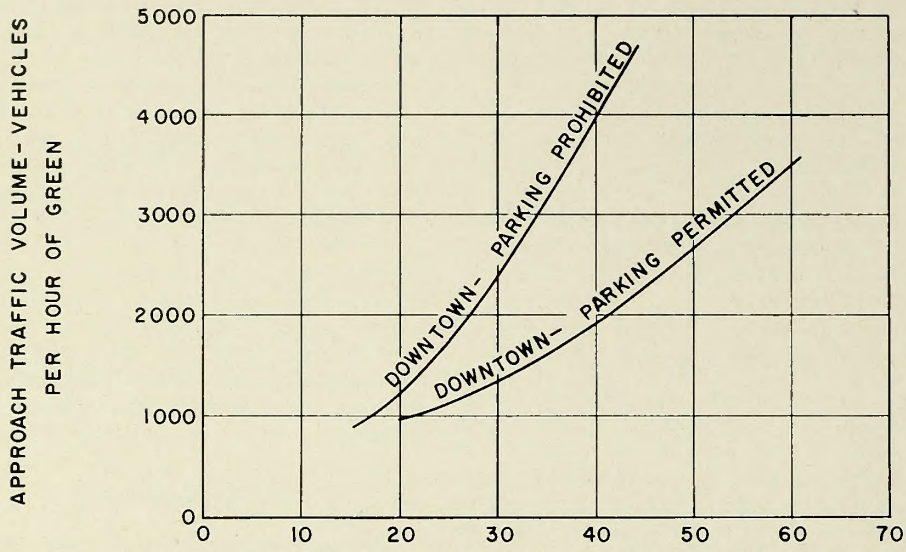
Parking Regulations

Parking the car at the curb is a priveledge and not a right. Streets are dedicated as public ways for the movement of traffic, therefore, they should rightfully be used for the parking or for conducting private business only when such use does not unduly interfere or delay moving traffic. However, from a practical standpoint the effect of parking on business must be given careful consideration. Parking cars use street space that could be used for moving traffic and the motorist moving into and out of parking spaces often delay moving of traffic. The parking of cars diagonally to the curb is a particularly bad practice since the cars so parked use more than "their share" of street space and the motorist backing out of such spaces block an additional traffic lane can create accident hazards.

Since curb parking is a universal practice that is permitted on a majority of streets in most cities, its elemenation provides the most effective way of obtaining additional street space to reduce congestion on existing streets. A restriction of parking may help obtain a greater efficiency from the existing street system by increasing the capacity through the provision of additional street width and by provision of adequate sight distance at intersections.

Traffic Control Devices

Traffic control devices are mechanical aids in the form of signs, signals, marking and island which supplement the traffic control measures. Any of the regulatory provisions are not enforceable unless at the time and place of the alleged violation a traffic control device is in proper position legible to be seen by the ordinarily observant driver.



INTERSECTION CAPACITIES OF TWO-WAY STREETS
FIXED-TIME SIGNALS

Signs help control, guard, and expedite traffic by (1) informing the driver where special regulations apply at specific places or at specific times or where hazards are not self evident, and (2) giving information as to the highways, destination and points of interest. There are three classifications of signs. They are (1) Regulatory-signs, which give the driver notice of traffic regulations that apply at any given location, disregard of which constitutes a violation of a traffic control measure. (2) Warning - signs calling attention to the conditions in or adjacent to a street that are potentially hazardous to traffic operations, and (3) Guide-signs showing route designation, destinations, directions, distances, points of interest and other geographical or cultural information.

The over use of regulatory and warning signs tends to cause a loss in their authority. One of the basic criteri or the use of signs is uniformity. Uniformity as to design, location, and application is necessary in order to obtain compliance and proper use.

Signals

Signals are use to improve the flow of vehiclar and pedestrain traffic through the assignment of right-of-way. Signals may also be used to reduce the frequency of certain type of accidents and to control traffic more economically than by manual methods. In other words, traffic signals are desirable where they will reduce traffic delays, improve traffic movements or reduce accidents.

In general, there are two basic types of signals - fixed-time signals and traffic actuated signals. By fixed time we mean a signal that has a consistant and regularly repeated sequence of signals indications. The cycle-length of time that it takes a signal to show red,yellow, and green, can usually be adjusted from a minimum of about 30 seconds to a maximum of about 120 seconds. The cycle length is pre-determined and established on the basis of traffic demands and the signal indications appear in accordance with a pre-determined sequence. In the ordinary traffic actuated signal the cycle length is not determined and is not fixed at any definite value. Signal indication are self - adjusting within certain limits so that they can more acturately fit the needs of the traffic. Therefore, a comparision of these two types of signals reveals that the fixed-time signal permits the maintenance of a time relationship with other signals in the area. It does not recognize the short time variations in traffic flow, therby resulting in excess a waste of time. Traffic actuated signals have a considerable measure of flexibility and automatically avoids some of the time and capacity loses inherent in fixed time signal.

Special merits of the fixed time signal are (1) simplicity of equipment which provideds easy service and maintenance (2) provides positive speed control in a signal system and (3) at many intersections that odes an adequate job of controlling intersection traffic. It can approach the efficiency of the actuated signal of intersections where traffic volumes are well balanced by direction and do not vary widely during the day.

Special merits of the traffic actuated signals are: (1) delay and inconvenience are minimumized (2) they are especially effective at multiple intersections or intersections where traffic requirements vary considerably during the day, and (3) under a heavy traffic demand the actuated signal tends to go into a regular schedule of operation resembling that of the fixed time signal.

When the problem of choosing between fixed time and traffic actuated control equipment is presented the factor of cost has often been the decisive one. Traffic actuated signal installations are considerably more expensive than most fixed-time signal installations, mainly because of the need for installing detectors in or adjacent to the roadway and the more complex time and circuit equipment in the controller.

It is most important that a careful investigation be made of the intersection requirements to determine which type of signal will be the more appropriate. If the investigation shows that the physical characteristics of the intersection present no unusual difficulties, that traffic is of substantial volume and reasonably well balanced by direction on both streets and does not change its time requirements too greatly throughout the day, and that no severe pedestran or turning movement problem exists, it is likely that the fixed-time of traffic actuated signal would be almost equally satisfactory. If the location is close to another signal with which it is now or at some future time desirable to make inter-connections for progressive movement of traffic, the fixed-time installation probably would be preferable. In cases where the intersection is quite isolated from other signalized intersection with no interconnection contemplated and where more than two streets of widely varying traffic loads are involved, a traffic actuated installation will likely result in less delay.

A large amount of inconvenience and delay can result from independent, nonrelated operation of closely adjacent signal installations operating on fixed time control. Most of this delay can be eliminated by carefully planned signal coordination. In general, all fixed-time signals within 1200 feet of one another and controlling the same traffic movement should be operated in coordination.

There are many conditions which can affect the efficiency of even the best

signal systems. Some of these are: (1) very short street blocks (2) narrow streets where parking and loading interfere with free movement (3) traffic composed of units of widely differing speed (4) complicated intersections, and (5) heavy volume of vehicles turning from or into the major traffic street.

In the planning of signal installations, careful consideration should be given to the future traffic demands. The equipment should have the flexibility to be adaptable for anticipated future traffic demands and should be of the quality that will give a long effective life.

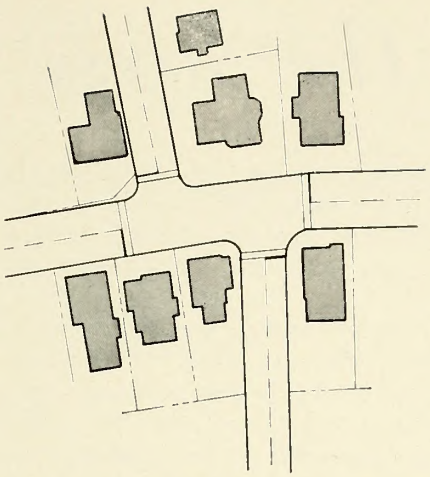
In summary, when signals are properly used they can (1) reduce the frequency of certain types of accidents, (2) affect orderly traffic movement, (3) by proper coordination assure a continuance or nearly continuance flow of traffic a definite speed along the given route (4) allow other vehicles and pedestrains to cross the continuance traffic stream and (5) control traffic more economically than by manual methods. When signals are not properly used they (1) increase accidents frequently (2) cause excessive delay (3) disregard for signal indications, and (4) diversion of traffic to alternate routes.

Localized Structural Changes

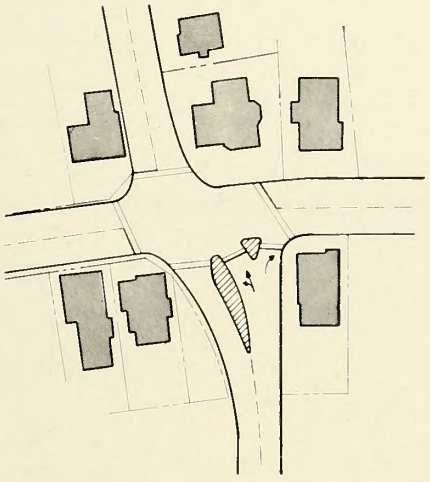
The capacity of a street to handle traffic efficiently is controlled to a great extent by the physical layout of the street and its intersections. There are many types of localized structural changes which, if made, can contribute greatly to the traffic capacity and overall efficiency of the existing street system. These changes are differentiated from the construction of completely new street facility or the complete rebuilding of an existing street in that they are confined to intersections or to relatively short sections of the existing street. Examples of this type of improvement range from the cutting back of curbs at intersections of "jog" or offset intersections. The examples to be discussed here are: (1) increasing curb radii, (2) channelization, (3) street widening, and (4) elimination of offset intersections.

Increasing Curb Radi

Since many of our urban intersections have been constructed, the physical and operational characteristics of the vehicles have changed significantly. Wheel basis are longer, vehicles are wider and larger. The use of commercial vehicles has grown. Vehicle speeds are higher. Thus, the portion of the traffic making turns, especially right-turn, at the urban



TYPICAL OFF—SET INTERSECTION
BEFORE IMPROVEMENT



TYPICAL OFF—SET INTERSECTION
AFTER IMPROVEMENT

area intersections is often required to make awkward turns which result in congestion and increased accident frequency. The length of radii required at intersections vary and should be based on individual intersection studies of vehicle types, turning demand, turning speed, pedestrain movement and natural vehicular paths.

Channelization

Channelization attempts to reduce congestion and accident frequency at intersections through the superficial control of vehicles approaching and entering the intersections. This is accomplished through the use of physical barriers, paint markings, signs, and signals, or a combination of these devices, which attempt to confine the vehicle to a definite path which can be defined an controlled within the limits of both the driver and the vehicle. The three basic factors entering into the channelization problem are (1) physical characteristics of the intersection, (2) human behavior, and (3) operational and physical characteristics of the vehicle.

Street Widening

The primary purpose of localized street widening is to increase the capacity and operational efficiency of specific sections of the street system. Common examples of this type of change is the provision of additional lanes at intersections for turning vehicles, cutbacks along the street to be used by busses for loading zones, and widening of a one or two block section of a street so that it will be of uniform width. As street widening is usually very expensive, careful consideration must be given to the benefits to be derived from the improvement.

Elimination of Off-set Intersections

Off-set intersections introduce complex traffic movements which complicate the signaling and control of traffic. A relatively low volume of traffic can result in congestion and make the intersection a serious bottleneck. Although channelization may be helpful, the only complete remedy is elimination of the off-set. This requires the acquisition of right-of-way so that the offset can be deflected to create a direct crossing. In the highly developed areas this correction can be very expensive; however. the increase in operational efficiency of a moderate traffic volume can more than off-set the cost involved.

In conclusion, it is again emphasized that significant contributions to the overall efficiency of the urban street system can be made at a relatively low cost by the effective use of traffic control methods. Both the City and the State have a responsibility to provide an efficient system of urban streets. The degree of responsibility for the provision of the physical streets system varies according to the function and relative benefits of the individual streets within the system; however, the provision of adequate urban traffic control measures is the responsibility of the City. Thus, it is obviously necessary that there be mutual cooperation between these two agencies if we are to obtain the optimum use from our urban street systems.

Why Control The Access

By R. J. Kimley

In the preceding talk, Mr. Rose discussed making the best use of what we have in the urban areas.

Let's discuss now the subject of "Why Control the Access" or how to make the best use of roads we are building new today.

First let's see what access control is. Basically, access control is the restriction or prohibition of access to the roadway pavement from abutting road side properties; that is abutting roadside properties have no right to enter of cross the pavement of the highway.

There are two types of access control. The first type is what we call full access control. Full access control is the complete prohibition of all contact of the pavement driveways and crossroads. There are no drives and no cross roads at grade.

The second form of access control is partial access control. Partial access is the limitation and designation of location of the entrance driveways and crossroads.

Why do we use access control? Let's use an illustration here to demonstrate a few things. In Fig. 1 are two roads which are in what we call suburban area; the roads are four lane divided and each have equal design features with the exception that road A is an access controlled road and road B has no access control. The cost of road A or the access control road is $2,700,000. The cost of road B or the uncontrolled access road is $2,500,00. The difference in cost of A and B is $200,000. This difference is the cost of providing the access control. Each road is intended to provide a free flow operating speed with the capacity of 23,000 vehicles a day. Each roadway on its opening day after construction has this capacity. Immediate volumes on each roadway are 10,000 vehicles per day. The estimated 20 year volume on the road is in the vicinity of 20,000 vehicles a day. This would represent an average increase per year of about 500 vehicles per day.

Now let's look at the same roads 10 years later. In (Fig. 2) the controlled access is still carrying traffic along at 55 miles per hour. The volume has increased to 15,000 vehicles per day still well under it 23,000 capacity level.

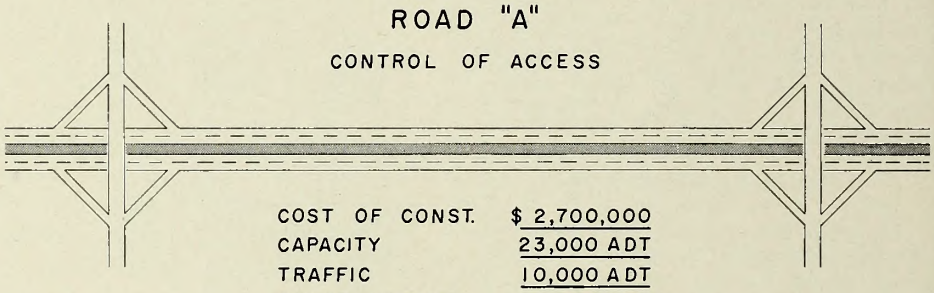
What has happened to the uncontrolled access road? Grade intersections have increased drastically. Speeds zones have been put in. Average speed for the section is 45 miles per hour. Some shoulder parking has occurred. The heavy development has reduced capacity by about 50% to about 12,000 vehicles per day at 55 miles per hour. The road is carrying 15,000 so obviously it is impossible to travel 55 miles per hour during peak period. On top of that signals, have been installed that reduced the average speed and now the original intended Level-of-Service has disappeared.

About this stage I would surmize that the Highway Commission would be looking for a new location of the road in order to resurrect and reprovide the Level-of-Service which was originally intended.

1960 — 5 Miles

ROAD "A"

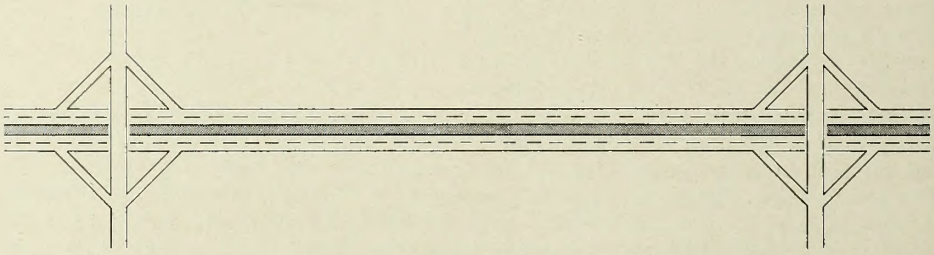
CONTROL OF ACCESS



COST OF CONST.	$ 2,700,000
CAPACITY	23,000 ADT
TRAFFIC	10,000 ADT
20 YR. VOLUME	20,000 ADT

ROAD "B"

NO CONTROL OF ACCESS



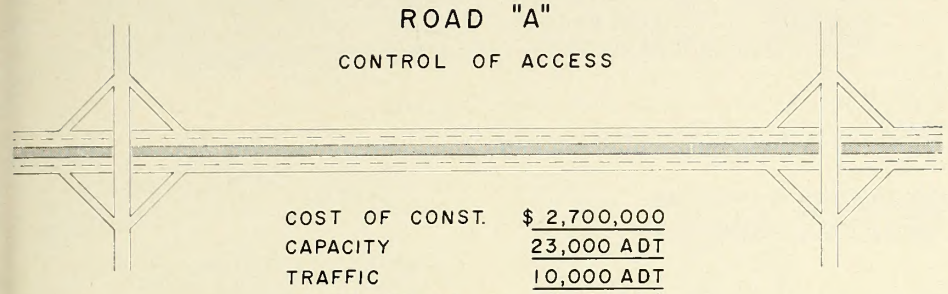
COST OF CONST.	$ 2,500,000
CAPACITY	23,000 ADT
TRAFFIC	10,000 ADT
20 YR. VOLUME	20,000 ADT

NOTE: DIFFERENCE IN COST OF CONST. $ 200,000

1960 — 5 Miles

ROAD "A"

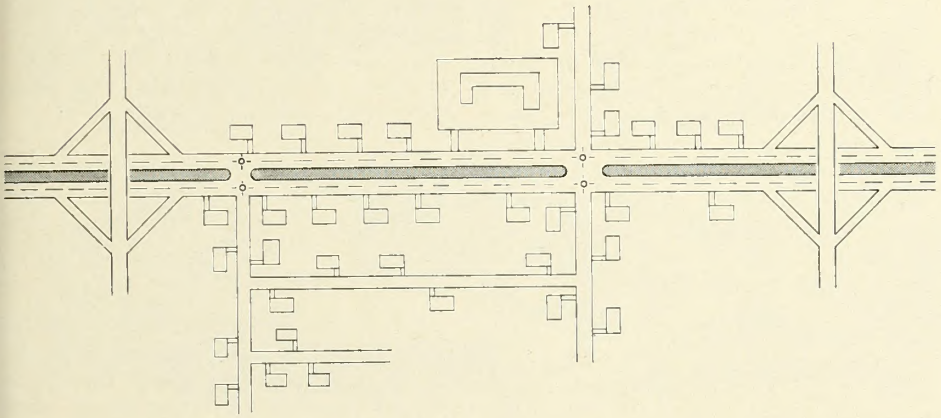
CONTROL OF ACCESS



COST OF CONST.	$ 2,700,000
CAPACITY	23,000 ADT
TRAFFIC	10,000 ADT
20 YR. VOLUME	20,000 ADT

ROAD "B"

NO CONTROL OF ACCESS



COST OF CONST.	$ 2,500,000
CAPACITY	12,000 ADT
TRAFFIC	15,000 ADT
20 YR. VOLUME	20,000 ADT

Design life of the uncontrolled access highway has been shortened from about 20 years to 10 year. Now let's see which is the most economical road. You will remember initially the access controlled road had a construction cost of $2,700,-000. The uncontrolled road had a construction cost of $2,500,000. A difference of $200,000 at time of construction.

Now let's look at the cost 20 years after the construction of both roads. The access control road is $2,700,000 and is still adequate. The uncontrolled roads original cost was $2,500,000. Now a new road is necessary and the relocation cost is $2,800,000 with the total highway construction cost of $5,300,000. About twice the cost of the controlled access road. Besides that the State Highway is responsible for maintaining two roads instead of one.

Other cost savings of access control are not so readily measured.

Fatality rates offer very good sales appeal for controlled access roads. Fatality rates on selected sections of expressway are about ¼ to ⅓ the rates of the uncontrolled access roads paralleling them. This is in spite of much higher operating speeds on the expressways. The old adage that speed kills is being put to task here.

Now that I have given you an indication of what can happen to a highway with and without control of access, you might ask the question; "If it is so good why don't we use it more often". "Why not rebuild the existing roads to increase safety and preserve their carrying capacity?" Well, if we had an ocean full of money it might be a pretty good idea. However, let me give an example of what occurred in a project that had recently been under consideration by the Planning Department. The example is US 29-70, the four-lane divided section between the Yadkin River and Lexington. This section was to be converted to interstate highway standards as part of I-85. The original cost estimate of acquiring access control on the seven miles of road was about 5 million dollars. It would require that amount of money to buy up access control from property owners already abutting on the project and construct the project which was already 4-laned. The cost of relocating the road to the same standard was 4 million dollars or a savings of about 1 million dollars. The answer in this particular case, we tentatively decided that the relocation was the most feasible solution to the problem.

Some roads have little or no roadside development or their development potential is low. Therefore, their capacity would be high and conditions safe without access control. The affect of little or no development on driving conditions along the road is quite similar to a controlled access highway.

"Why not build all newly located roads to control access standards? The general approach is as follows:

All newly located roads should have some degree of access control either partial or full. New facilities needed to provide a high Level-of-Service in the urban areas should have full access control. Roads through rural areas where development is expected to be light or where development is physically impossible, swamp areas for instance, need no access control. These are the general roadway analysis design procedures that are being used by the Highway Commission today.

Why are these two different kinds of road access control used and what is the difference in them? It was mentioned briefly before just what their definitions were. Let's see why we decided on using partial access control at times instead of constructing all our highways with full access control. You will remember that full access control prohibits all contact and crossing of the roadway. Certain serious rights-of-way problems are

created by this type of control. The courts have held that property owners along a yet unbuilt road have no legal access rights to that road, therefore the increase in cost of the right-of-way for controlled access highways is due primarily to the division of property or the inability of the property owner to get from one piece of property divided by the road to the piece across the road.

Partial access control limits the numbe of contact points allowed to the property owners and to the cross traffic at grade, Since the number of contact points are limited and not prohibited the severance damage costs are significantly reduced, therefore savings can be effected by using partial access control in areas predominantly rural in character.

In rural areas there is little effect on capacity if high volume crossroads are graded separated and partial access control is used. The money saved with partial access control, of course can be applied to some other needed project elsewhere in the State.

Well let's summarize this idea of access control and where you will probably find access control recommended in the future.

1. Well certainly on the Interstate System. The full access control item is a standing requirement by the Bureau of Public Roads as established by the American Association of State Highway Officials.

2. You will probably find access control of some type recommended on high volume, urban bypasses and expressways and on the urban trunkroute system where the new sections have created potential development. You will certainly find some degree of access control on newly located road sections in the suburban and rural areas on the trunk system. And you will find the application of some degree of access control to existing roads rebuilt for trunk route purposes, where acquisition of control of access on the present road is less expensive than the relocation of a new road plus maintenance for the two roads.

We in the Highway Commission feel that the control of access principle is like paying an insurance premium against depreciation, and for the protection of unnecessary future expenditures due to extra highway construction caused by roadside development. It is expected that on a long term as shown in our illustrations that a significant amount of roadway construction money can be saved in the future. And these costs can be applied to badly needly projects elsewhere in the State. In the long run it enables us to build more roads more permanently and safer.

Roadway, Interchange Design Problems

By W. A. Wilson, Jr.

In considering the problems of Roadway and Interchange Design of the modern highway, we must keep in mind that the art of modern road building is the result of gradual development and improvements to meet the changing traffic needs. Increasing attention must be given to location and design if we are to fit the future traffic needs of the nation. This is the reason we try to design for a minimum of twenty years in the future. In so planning this far ahead, some of the designs that we do really look over-designed to the average person; however, if this person could go over with us the reasons for the design he may find, to the contrary, we have not not designed high enough.

We, as designers, are trying to get as safe and efficient highways as possible with the joint consideration of design traffic volumes, turning movements, topography, cost and available right-of-way.

This, along with enforcement and driver training, should give us a facility of maximum safety, efficiency and economy in operation.

After receiving information regarding topography and physical features from the Aerial Photogrammetry Department on the corridor to use, traffic data and recommendation from the Advanced Planning Department, we are ready to start our preliminary design.

In the preliminary design of the roadway, the designer has the problem of the best location of the line; which is generally done on topographic maps of 1 in. = 200 ft. prepared by the aerial Photogrammetry Department. Topography is a major factor in the location and generally affects alignment, gradient, sight distance and location of interchanges. The traffic information given to the designer tells the designer what type facility he is to provide, the type of interchanges needed, and design speeds.

With this information the designer in his preliminary design should be able to arrive at the best location to fit the topography for the best interchange design and the highest design speed.

In designing a facility, the designer has three policies for his use, (The Blue Book), which is the policy on Geometric Design of Rural Highways, (The Red Book), which is the policy on Geometric Design of Arterial Highways in Urban Areas, and The Highway Capacity Manual. By combining the information found in these, he should be able to arrive at any design standard he wishes.

Below are some of the preliminary design problems on roadway and interchanges that were encountered on a project. This project being relocation of U. S. 1 from Apex to Raleigh.

NC 55-Apex—Recommendation from Advanced Planning Department—Diamond Interchange adequate. We had to check if we could get a Diamond in without additional length on Railroad Structure; or, since heavy turns were in the N. W. quadrant a partial Clover could be used. Grade on N. C. 55 was checked for sight distance and had to be changed in both designs.

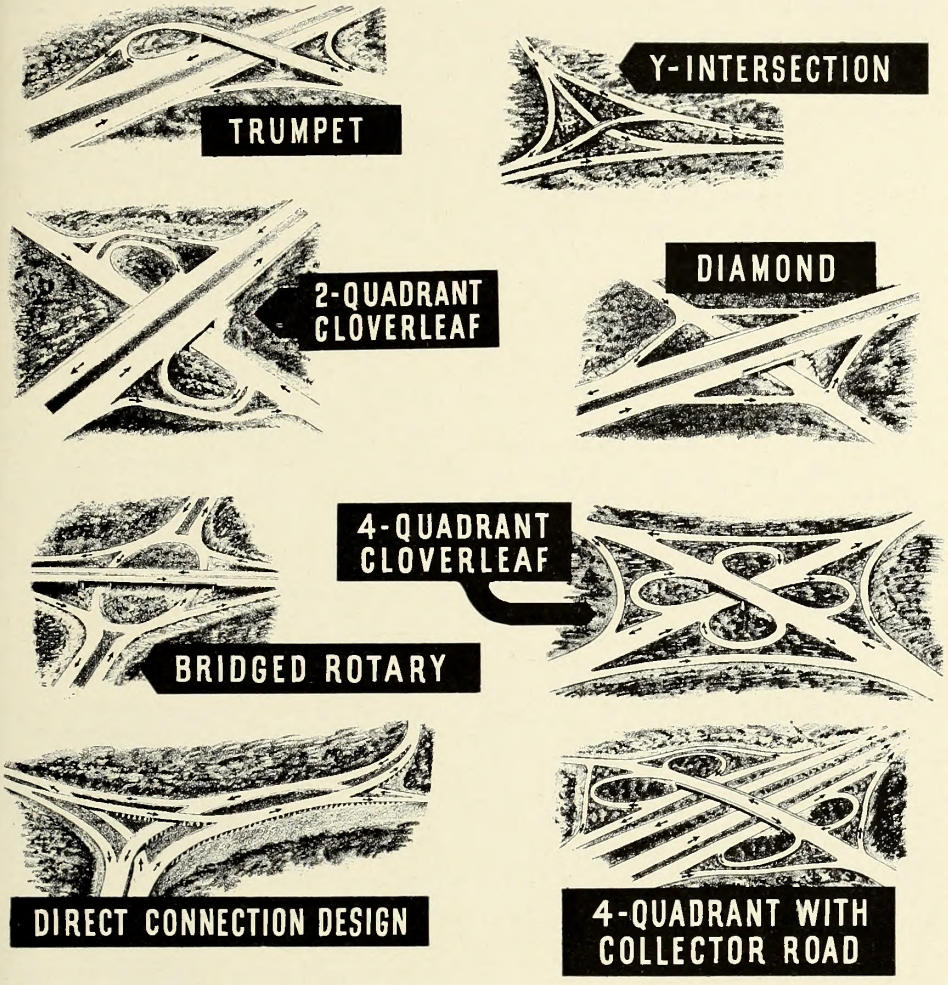
We worked up both designs and the Diamond was the cheaper of the two. Since traffic operation did not control, we selected the Diamond.

Old NC 42—Recommendation from Advanced Planning Department - Diamond Type Interchange adequate. We checked Diamond against Partial Clover, but due to skew of N. C. 42 and crossing of County Road South of Interchange, the Partial Clover was selected. This gives better operation on the county road; it does not have to interfere with the ramp traffic. The Partial Clover in this case takes less right-of-way than a Diamond.

Haywood Road—Original recommendation by Advanced Planning Department - Diamond Interchange adequate.

In this interchange we ran into the problem of drainage and utilities. If a Diamond was used, we would have had to provide two additional triple 6' x 7' R. C. Boxes, N. W. quadrant and extensive utility relocation. So, on this skew, the Partial Clover was the solution.

TYPICAL INTERCHANGES



Cary-Macedonia Road—Recommendation from Advanced Planning Department-Diamond Interchange adequate.

In this interchange, the addition of two county roads into the interchange area was the problem. We had to design ramps in the N. W. and S. E. quadrants so we could handle the traffic on the county road as well as the ramp traffic.

In the N. W. quadrant we had to tie the ramp into the county road before it got to the main road. Grade on county road governed the length and grade on the ramp. Traffic volume determined the distance from the main road that we could tie ramp into county road.

In the S.E. quadrant, the elevation and position of the county road governed the length of the ramp and grade. The distance from the ramp exit to the turn-off for the county road on the ramp is very important. This distance has to be far enough for a vehicle leaving the facility at design exit speed of the ramp, which in this case was 55 miles per hour, to come to a stop and make the turn into the county road and not have fear of someone running into the back of him. This minimum distance is set at 600 feet.

Also, since there is two-way operation on a portion of ramp, a divider is provided to keep traffic in proper position and discourage it from going the wrong way on a one-way ramp.

Jones-Franklin Road-Recommendation-Diamond Interchange adequate. Property damage in the S.W. quadrant, additional culvert if ramp is required in the S.W. quadrant, and skew of road determined that this design is most desirable and economical. The additional lane under the bridge was not near as costly as the culvert would have been, and the loop in N.W. quadrant removed one left-turn from the county road.

Melbourne Road and Western Boulevard—Recommendation - Half-Diamond at Melbourne Road, and full Clover at Western Boulevard or Directional Type Interchange.

The half-Diamond was recommended just for the purpose of getting the people in this area to and from work in Raleigh. This presented the problem of how close together entrance and exit ramps should be placed.

In the design of the Western Boulevard Interchange, both the full Clover and Directional were worked with cost estimate made for each. We found that with the Directional type the saving in extra travel distance over a period of 20 years would off-set the cost of the additional structure required. The cost of right-of-way was actually a little cheaper in the Directional type. Therefore, with these conditions in our favor the preliminary design is a Directional type interchange with adequate distance from the entrance ramp to the exit ramp at Melbourne Road so that weaving does not become a problem.

Interchange - Hillsboro Street - Wade Avenue—Recommendation - Half-Clover at Hillsboro Street; Diamond at Wade Avenue.

Due to excessive right-of-way and property damage, we had to go to a four (4') ft. median and curb and gutter section in the area between Western Boulevard and Hillsboro Street.

In the design of Hillsboro Street interchange, curb and gutter was used, lower design speeds, sharper curvature and steeper grades, in order to acquire less right-of-way. We used minimum standards instead of the desirable standard.

In the design of the Wade Avenue interchange, we could not get the Diamond in because the Diamond ramp entrance of Wade Avenue would be too close to the exit ramp at Hillsboro Street, Entrance ramp at Hillsboro Street to exit ramp at Wade Avenue, a full lane was provided.

Ridge Road and U. S. 70—Recommendation from Advanced Planning Department - To provide full access to Ridge Road and U. S. 70.

Our problem in this area was to incorporate Ridge Road into the interchange since it required full access due to the heavy traffic movements from Ridge Road to U. S. 70. In this design, the existing grade on Ridge Road governed the entire design because of excessive property damage if the grade on Ridge Road was changed very much.

As you see, the designer, up to this point, has used only the topographic maps of 1 in. - 200 ft. to develop the preliminary alternate schemes and the final preliminary schemes. With this final preliminary design, the public hearings can be held. Any changes that are suggested at the public hearing can at this point be studied and made a part of the preliminary design, if found that they can be incorporated into the design without lowering the design standards of the facility.

Once the general design has been determined and a preliminary plan is available, it remains to develop this plan to the scale and detail of the customary construction plans.

The preliminary plans and accompanying profiles largely are graphical solution, but the final design is made by a series of calculations, development of detail, and preparation of plans and profile to scales and accuracy suitable for construction for the general design already established. Alignments are computed by the Co-ordinate System with the use of the computer and run in by our field parties. Notes are returned to the Roadway Design Department for them to plot up the plans and work the final design of the roadway and interchanges. Final grades are calculated and checked for design speeds and drainage. Grading, drainage, structure and pavement details are fully worked out, construction quantities are calculated, and final construction specifications established.

In developing the final design plans, the designer has the problem of getting the design features of the facility shown on the plans. He tries to show enough information on the plans so that in the construction of the facility the design that the designer has strived for will be achieved.

In the final design of this interchange, as well as all interchanges, the designer has a lot of design data and computation to make and check.

Given the interchange area plotted to a 1" - 50 ft. scale, the designer takes his preliminary design and begins to develop the final design. In developing the final design he must follow a certain procedure.

First, he must check to make sure that the preliminary layout made in preliminary design will fit the data and proposed grades of the final design of the facility. He must then compute the ramp alignment and data - this is usually done by the computer. The ramp alignment is then put on the detail with all pavement width shown in the area of the entrance and exit ramps, so that the grades can be computed. In computing the grades, superelevation breakdown and run-off is shown on the detain, so that when the grade is put in on the ground the grade line will take care of the superelevation shown on plans and will not have to be adjusted to fit the superelevation. After the ramp alignment and grades are checked, the finished details, such as; pavement width, degree of curve, length of radius, type of island paved shoulder, superelevation, etc. are put on the plans.

The next steps are the extension of cross-sections to cover the ramps, plotting of profiles on the ramps, putting on templates for the ramps, and grading of interchange area. In the grading of interchange areas, we sometimes have to plot the finished contour in order to know what sight distance we have from the ramp to the project, and also as an aid for the drainage department to put on the required drainage.

Now, with the grading of the interchange complete, we have to show construction limits, proposed right-of-way, control of access lines, if required, the estimated traffic and turning movements, and entrance and exit speeds for the ramps. This completes the design of the interchange with the exception of a final check of all steps taken and the actual working of the quantities involved.

In preparing the plans for so many projects, the designer must utilize to the fullest extent all shortcuts to meet the schedules of lettings.

We have compiled a handbook of Design Procedures and Computations frequently used by the designer in the design of a project. I would like to go through this handbook and point out some of the information to be found in it. Some of you may find that the information compiled in this handbook will help you in the preparation of plans and estimates for highway projects, city projects and other projects involving estimating quantities.

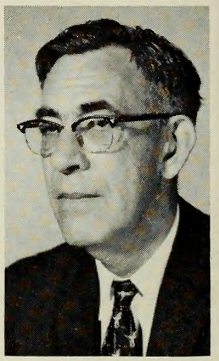
I hope that I have given you a general picture of the roadway and interchange design problems. It is our purpose as designers to show enough information on the plans to insure a facility of highest standards, which will stand on its merits for many years in the future.

Right of Way Aspects In Design of A Project

By W. H. Webb, Jr.

Before beginning my remarks, I would like to point out that the design of a highway project involves much more than the actual drafting of plans for roads and bridges. The design commences with the advance planning, then topographic, drainage and structure surveys, and finally to the drafting of completed construction plans and estimates.

In the design of a highway project, the principal considerations from a right of way standpoint are present and future service to be rendered by the project, the present and potential land usage of the area through which the project must pass, and cost; the latter being dependent to a large extent on the first two.



Webb

In present day highway design, right of way falls into three classification; that is, full control of access, partial control of access and free or uncontrolled access, with some projects having a combination of the three. For Interstate System projects, full control of access is required by statute; therefore, the decision as to the degree of control is no problem. For trunk-line primary highways, full control of access is desirable and is usually acquired when the project is to be constructed on new location. For example, US 1—Raleigh to Sanford, US 64—Nashville to Rocky Mount or US 421—Winston Salem to Yadkinville.

On projects which involve the widening or improvement of existing routes on the trunk-line system, the cost of providing full control of access is often prohibitive and therefore, concessions in desirable design standards have to

be made. These concessions may consist of providing frontage roads, providing some pre-determined points of access at varying intervals or where roadside building is unusually heavy; for example, Wilkinson Boulevard between Charlotte and Gastonia, eliminating the control feature of right of way entirely.

In making these decisions, right of way cost estimates shoud be prepared for the consideration of the planning and design engineers. If funds are limited, it may be decided to acquire the right of way to the full desired standard initially and make necessary cost concessions by resorting to stage construction such as eliminating for the time being such features as grade separations, dual lane construction, high type pavement, or frontage roads. It should be pointed out that while some features of construction can be deferred and the project still render adequate service until funds can be made available, it is usually not practicable to defer acquiring adequate width or access control of right of way, for once a new highway is opened to traffic without proper controls, roadside buildup is inevitable with the attendant increase in property values. This is particularly true of urban bypass projects. On such projects, the providing of some control of access is of paramount importance for the city or town invariably, and usually quickly, grows out to encompass the would-be bypass.

On controlled access projects, the providing of frontage roads poses somewhat of a problem in that often the design of the completed project must be delayed until appraisals have been completed. According to policy, the construction of frontage or service roads is contingent upon a corresponding savings in right of way and property damage costs equal to or in excess of the cost of constructing the frontage road. If, after appraisals have been made, the amount of severance damage appears to be excessive, plans and cost estimates for a frontage road are called for and re-appraisals, based on providing the frontage road, are made; if the difference in the two appraisals equals or exceeds the cost of the road, the plans for the project are usually revised to incorporate the frontage road. In some instances, the need for the frontage road is so apparent that appraisals are not necessary. Similarly, the design of the project may be altered to provide for vehicular underpasses, overpasses or cattle passes based on right of way considerations.

On low traffic primary highways or secondary project where land service is an equal or paramount consideration to traffic, the design engineer need only concern himself with providing adequate widths of right of way to accommodate present and anticipated future construction with sufficient marginal control being provided.

In addition to the selection of the type of right of way to be acquired, consideration should be given to fitting the location of the project to the present and potential land use pattern of the area through which the project is to traverse. This should be done so as to interfere with the present use and probable future use of property as little as possible, within the limitations of good design and cost. These considerations should be studied in the projection or location stages of the design.

The planning or locating engineer should, before tying down the alignment, have a good knowledge of the location of property lines, the present use of the land and the potential highest and best use of the property. Take for instance a proposed highways location generally paralled to a railroad; the land along the railroad may, at the time, be used for farming, whereas, within a few years, its highest and best use may be for industrial sites. If the highway is located adjacent to the railroad right of way, the railroad frontage is lost and then the right of way agent may be confronted with a claim involving heavy severance damages, say $1000 per acre for potential development land rather than the anticipated $300 per acre for farm land.

Or take a dairy farm—the selected location of the project may pass between the barns and the bulk of the pasture and cropland. After appraisals are secured, a vehicular underpass for the passage of farm machinery and cattle may be indicated. Had this been considered on the original location, a shift in alignment may have resulted in the saving of 10 to 15 thousand dollars in the cost of providing an underpass or paying severance damage without materially increasing construction costs or adversely affecting geometric standards. Careful study should be made as to the location of property lines, farm access roads, location of buildings, fields, etc. on all properties between fixed control points so as to minimize the overall damages.

Before finalizing any survey, all recorded real estate subdivisions within the location corridor should be shown on the projection map and the best route of crossing the subdivision be determined. As a rule, for predominately land use roads with narrow rights of way to follow a subdivision street within the dedication may be the answer. For the freeway type project where wider controlled access rights of way are required, the best solution may be to occupy one side or the middle of a block or blocks, leaving one or both adjacent streets as frontage roads. If it is not feasible to cross a subdivision parallel to the established street pattern, the projection should, if possible, be made to cross in such a manner as to minimize disrupting the traffic pattern within the areas and to cross as many undeveloped lots as is possible.

With reference to widening existing roads, the highway engineer finds in some instances, usually in urban areas, that roadside development is about equal on both sides of the road. When this condition exists, he has a real problen on his hands; particularly, when the design right of way width closely approximates or exceed the building line on each side of the road or street. This is the time to call for an experienced right of way agent or an appraiser. To follow the existing center line, widening equally on both sides, may result in taking and proximity damages equal to or in excess of the damages that may be incurred by placing all of the widening on one side or the other. In making an intelligent analysis in such a situation, it is necessary to know the depth of lots on both sides of the road or street so that it can be determined if buildings have to be bought and demolished or can be moved back. The value and type of buildings on one side must be weighed against the other side. For example, taking the pump and service area from a service station or the parking area from a supermarket, on one side, may cause a damage in excess of that caused by taking the front yards, or even the buildings, from four or five rental properties on the other.

Another factor to be considered is that by shifting the widening to one side, the construction cost may be cut by saving a usable curb line or sidewalk; likewise, a substantial saving may be effected by not disturbing utility lines on one side or the other.

In areas where the roadside development is spotty and may vary considerably from one side to the other, usually in rural areas, it may be more economical to vary the widening from one side

to the other; however, the design engineer and the right of way agent or appraiser should check this carefully as the cost of usable pavement, and roadbed sacrificed in making transitions may exceed the savings in right of way costs brought about by changing sides.

In properly designing a highway, the grades should be given as careful and considered study as to their effect on abutting property as is given to alignment. Extreme care may have been taken to avoid a valuable business property in establishing the alignment, and then the bulk of any savings in right of way cost may be lost if the grade is laid so as to seriously impair the access to the property. In laying the grades of a project, especially through developed areas, the design engineer should be constantly aware of damages that might result from changes in grade and be aware of the fact that some additional cost in excavation may be more than offset by savings in property damage. A typical example of this was encountered in the design of Downtown Boulevard here in Raleigh. The grade past an oil company bulk plant was originally laid about three feet below the existing road, which would have made access to the property virtually impossible. This was noted on field inspection and the grade was raised two feet, thereby eliminating what could have been a costly damage claim.

Changes in grade can often cause damages far in excess of the value of land taken by impairing or destroying access and by blocking the visibility of the property. In the design of highway separations, right of way considerations may be more of a determining factor than excavation of structure costs in deciding which highway should be carried over the other. High approach fills in front of developed property can create loss of access damages as effectively as if control of access design requirements were made a part of the project.

Tied in with the question of grades is the determination of the need for retaining walls to eliminate or reduce property damage costs. This is one item that calls for most careful consideration based on accurate appraisals and cost estimates. There is a strong tendancy on the part of most right of way agents to under estimate the cost of walls, and unless there are expensive buildings or special use properties involved, walls can seldom be justified. Based on past experience, I have found that if a property owner constructs an inexpensive substandard retaining wall, it will endue like the Rock of Gibraltar, but if the Commission, in order to cut costs, constructs a similar wall, it will not last until the project is completed.

The design engineer can also bring about some justifiable savings in right of way cost by changing the slopes of cuts or fills to meet a particular situation.

An important right of way consideration in determining grades is the presence of underground utilities such as water and gas mains, sanitary sewer lines and telephone cables. As a rule conflicts with utilities on new location result in added cost to the project, while underground utilities in and along existing roads are usually in the status of encroachments and should be adjusted at the cost of the owner of such utilities. Even though the Commission may not have to bear the cost of adjusting the utilities, the design engineer should endeavor to keep such adjustments to a minimum consistent with design limitations as the same taxpayer who pays for the highway will have to pay for the utility adjustment through increased utility rates.

The adjustment of some utilities such as large diameter gas transmission lines, main water supply lines and large diameter sewer outfalls, are so expensive to move or lower that the location engineer should endeavor to place the crossing at a point where there will be embankment rather than cut. As an extreme illustration, when the plans for US 64 west of Lexington were prepared, several years ago, an interchange was to be provided to NC Route 150. After the plans were prepared, it was found that the location of the interchange was over a 30" natural gas transmission line requiring that it be lowered approximately 20 feet. Estimates secured from the pipe line company indicated the cost of lowering and relocating the gas line to be about $200,000; it is needless to say the highway was then relocated to a point where a more favorable crossing could be had.

The design engineer and right of way agent should at all times take into consideration the cost and other problems incidental to utility relocation or adjustment. The utility company must secure substitute right of way when lines are relocated and in congested areas this alone can create quite a problem. There also may be technical difficulties encountered placing limitations or just what can be done by the utility company. On a current interstate project, there is one interchange being constructed that involves the relocation of a 110 KV power transmission line on steel towers, a local distribution power line, a municipal water main, a 6" natural gas main, a telephone line, and finally 10" and 12" petroleum products pipelines, all of which will cost well over $100,000 in relocation costs. I do not know what consideration was given to these utilities in the location and design of this particular interchange, but the costs involved would certainly have justified careful study being given to changing the location of this intersection to a more favorable place.

In making comparative estimates of right of way costs for design study, the right of way agent or appraiser is often prone to take into consideration all land and building costs and then overlook utilities; whereas, the utilities in some instances could be the controlling factor cost-wise.

Drainage also has its design problems insofar as right of way and property damages are concerned. Compensable damages may occur from diverting water from its natural course, concentrating the flow of water or retarding the flow of water. The faulty design of drainage facilities may bring on added property damage claims. One undesirable feature of this type of claim is that the damage resulting from improper design may not become evident until some time after the project is completed and funds are closed out, thereby imposing the cost of correction onto the maintenance budget rather than into the cost of construction where it properly belongs.

The diverting of a stream channel which also may be a property line may save the cost of an additional culvert but it should also be considered that in so doing it may remove the only source of natural water from a 50-acre pasture that has depended on the branch or creek for its only water supply or it may remove the only source of irrigation water from a farm that can demonstrate increased yields from irrigation.

In designing outlet or tail ditches from drainage structures through developed or subdivided property, it may prove more economical from a property damage standpoint to follow lot or property lines than to follow the most direct route to the natural drainage; for instance, a ditch cut diagonally across several lots may save a few dollars in excavation costs but may result in destroying the utility of the lots. Through highly improved property, it may be justifiable to pave channel

change or ditch banks where buildings or valuable property may be jeopardized by erosion.

In summation, I would like to emphasize that since the widespread employment of controlled access rights of way and the construction of the freeway and expressway type of highway, right of way and property damage costs have increased to the point that now these costs represent a very substantial part of the overall costs of a highway program. In fact, on some of our urban projects, the cost of right of way may even equal or exceed the cost of construction.

In order to hold these ever increasing right of way costs to a reasonable level, we cannot afford to ignore or take lightly the right of way aspects of the planning and design of a highway. In the old days of highway construction, the term "severance damage" was one seldom heard, but today it has a real and costly meaning. Then the location engineer paid little attention to property lines, in fact, they were only one more item of topography to be haphazardly secured after the location was completed. Now the property lines should be a basic part of the preliminary data influencing the selection of the location.

Today, right of way considerations play a vital part not only in the selection of the overall route of a project but in working out the many localized details of the design.

Construction Procedures vs Design Considerations

Roadway

By John Davis

What is the purpose or duties of our State Highway Comm'ssion? One answer, among others, is to construct and maintain a better facility for the use of the automotive traveling public. We are concerned here with the construction of this better highway and the problems and procedures of construction as they are related to design and preparation of plans and proposals.

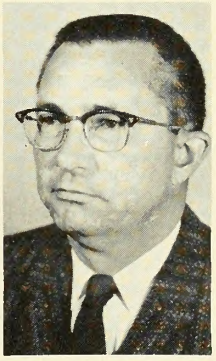
Since it was implied that my part in this program should or could be in the nature of criticism, I shall comply, but it is intended to be of a constructive nature and I hope that it is taken as such. What, I might say, does not necessarily reflect the collective thinking of others.

Field Plan Inspection

After initial planning is complete, the need is justified, and the locatoin decided upon, the preliminary or field set of plans is prepared. This field set of plans is then made available to the field construction forces for review on the site, with recommendations for items to be included or excluded, changes to be made in grade and/or alignment, and any other pertinent information which would lead to the preparation of a more complete, and of course, a more easily understood proposal and plans. This is the point at which the field construction forces first come into direct contact with the construction of the project. Let me say at this point that it is highly improbable too much information could be placed on this field set of plans. In most cases, sufficient detailed information is lacking. With this in mind, it should be remembered that the Division personnel including the Resident Engineer to be assigned the work should make a more concerted effort than ever before to give the Design Departments their recommendations in detail. Representatives from each of the other Departments should be available for discussion regarding items in their specific fields, and not only available but to make their recommendations. The Resident Engineer should always bear in mind that he will be the person living with the project until its completion, and the time for him to make his thinking known is on this field plan inspection. No one has any sympathy for a member of the field inspection group who at a later date comes up with some remark such as "so and so should have been included in the proposal or on the plans" but just didn't say anything about it. On most such occasions his reason would be "that in the essence of time, it was overlooked." This is not a true saying of time for in the long run delays will occur while trying to do or undo what should have been done in the first place.

Some things, among others, that should be given extra attention on the field inspection would be the location of borrow and material pits, limits of clearing and grubbing if other than that specified in the General Specifications, recomended changes in grade or alignment with limits for each, giving some leeway in order that the Design Department may make proper adjustments.

It is in my opinion the direct responsibility of the Division personnel to see that the field plan inspection is throughly made, that the inspection report be complete, and the field plans be prepared so that no question will arise as to intent. If this is done then the Design Department will be able to furnish project plans and proposals that are clear to the contractor as well as to our own forces. This in turn will enable all concerned to at least have equal information, consequently some of the confusion, differences of opinion or interpretation, and possible claims will be eliminated. This will in the long run stimulate better Commission-Contractural relations, provide sounder construction, and effect a more economically constructed highway system. Completely prepared plans will also eliminate the necessity for our present large number of extra work order and change order requests.



Davis

In the past, too little effort has been put forth by the field construction forces in preparing this field set of plans. Sometimes the information is so indefinite it is impossible to determine just what is desired or required, resulting in a compromise which may not cover the actual conditions.

Preparation of Final Plans and Proposal

The preparation of a set of construction plans containing all information necessary to build a given project is of vital concern to both the field forces and contracting agency. The responsibility to prepare this final plan and its proposal rests with the Design and Planning Departments. After the final plan and proposal are prepared it should be made available to the Division personnel for a review and appraisal before the date of advertisement for a letting. I can, of course, appreciate the fact that time is an essential element in getting the project plans and proposals ready by the deadlines defined. Nevertheless, many instances occur in which changes are made in the Raleigh office from those things or items recommended by the

Division. This immediately puts the Resident Engineer on the defensive, because he does not actually know the content or intent of the project provisions until after the project has been let, and in some cases, until it is awarded; therefore, it is impossible for him to discuss the work intelligently with anyone, much less plan his operations or do any preliminary work toward easing his future problems.

To provide the Resident Engineer with other needed information, a copy of the design criteria and recommendations related to base type and depth and pavement type and depth should be sent directly to the Resident Engineer. This will enable the Resident Engineer to acquaint himself with, and plan his work in accordance to that required.

In preparing plans for a project involving grading only where the ultimate design criteria are known, why not include all things in this grading project according to the ultimate design standards so that we may eliminate changes made between the grading and surfacing contracts. Usually the quantities involved are minor, but the affect on the over all project may result in considerable expense above what would have been necessary had the work been done originally. In such cases drainage has to be reworked, head walls, catch basins, etc., have to be removed and replaced and new alignments staked out. This creates additional work on the field party at a time at which it is pushed for production.

Much confusion often exists in the field as to the proposed new location of buildings and appurtenances to be moved in the house moving contracts. This may result in extra work when the property owner changes his mind or is just generally dissatisfied. Much litigation is involved and public relations are at a low ebb. This might be eliminated if the Right of Way Department should see fit to include the valuation of all buildings within a complete package deal with each and every property owner in negotiating the Right of Way agreement for payment of damages. In other words buy the buildings and resell same.

I am aware of the fact that some projects are let with the base and pavement included in the grading contract but since the use of a trench section has about been eliminated, it is my thought that all grade lines shown should be subgrade. Some plans are prepared to subgrade and some to finish grade. This only breeds confusion and it is much easier for the Resident Engineer to work from subgrade rather than from crown grade. The transition to structure grades on subsequent paving contracts does not require any additional effort since in most cases this has to be done whether the grade shown is crown or subgrade.

With regard to project drainage, the actual field conditions sometimes have changed after the drainage survey has been completed. For this reason and others of obvious importance a copy of the complete project drainage survey should be sent direct to the Resident Engineer in addition to the plans. In some cases in the past, this survey has been sent to the Division office and that is as far as it goes. The drainage survey in the hands of the Resident Engineer will oftentimes eliminate trips to the project by representative of the Hydrographic Department or further clarification of some point in question.

One of the greatest pressing needs for additional information is in the answer to the question, how deep should I remove this unsuitable material or is there unsuitable material to be removed? The answers to these questions can only be given after the areas in question have been cored. The information obtained as a result of core samples should be shown on the plans. In this connection, greater effort should be made in locating a sufficient quantity of borrow material and to see that this material is the required quality. There should also be closer coordination between those locating the materials and those testing so that the reports will reach all persons concerned, and as soon as possible after the tests are complete.

Probably the most time consuming and complicated problem facing the Resident Engineer is that of staking out some of our interchanges on primary and Interstate projects. Although the details of each, as shown on the plans are much more complete than what they have been in the past, there is still room for improvement. To stake out a complete interchange with access in all quadrants will, at the best, require the average party from two weeks to a month to complete. The absence of a station number of one control point might result in several hours or even day's delay. This is especially aggravating when the contractor's equipment is brushing the seat of your pants.

Another point of importance, and particularly so in our eastern areas, is the absence of ditch grades and appropriate special provisions through sections of flat and near flat grade on the project center line. In some instances flat grades have been shown on profile with a typical section calling for a constant ditch depth. It is practically impossible to drain such areas, and when such conditions exist on a project to be graded on a mileage basis the Resident Engineer is handicapped in arriving at an agreeable method of measurement and payment for this excavation. Ditch grades should be shown and so noted as to the basis for payment.

It is my understanding that in the near future, the new location of all utilities to be moved will be shown on the plans. This is a step in the right direction and should be followed through to its culmination.

In most instances the contractors try to go over the job with the Resident Engineer prior to the letting date. The more information the Resident Engineer can give the contractor with regard to content and intent will, of course, give everyone a better insight and result in more uniform bids.

These are some of the things on which we need to improve in preparing the construction plans and proposals. We do indeed need to make improvements elsewhere. Directing our efforts toward improving the plans and proposals cannot be on an individual basis and no one person or group can be judged as being responsible for the absence of information. This needs to be a collective effort with the best thoughts of all concerned merged into a final product complete in all phases.

Construction of the Project

Assuming that all things on the plans are correct and complete the field construction forces should remember that the plans and contract have been prepared within limits for the best interest of the Commission and the public. The field forces should also remember that the contractor has bid on the work to be done according to the general specifications and within the defined limits of the information furnished within the plans and contract; therefore, there should be no deviation without proper authority and negotiation, where necessary. The basis for established authority is contained, first in the general specifications, second within the plans, this having precedent over the general specifications, and third, the contract with its special provisions having precedent over all other information.

Should the necessity arise for changes to be made, the proposed changes should first be cleared through all departments including the Bureau of Pub-

lic Roads, if a Federal Aid project, prior to directing the contractor to proceed with the work. The responsibility for clearance with the Bureau of Public Roads is a duty of the Division personnel and should not be passed on to the central construction office. In many instances the construction engineer's office knows nothing of the proposed change and is therefore in no position to pursue the request intelligently.

Recent developments indicate that some of the Resident Engineers are paying very little, if any, attention to whether contractors and or sub-constractors payrolls on Interstate projects are being properly submitted to the Construction Department. It is absolutely necessary that all labor working on Interstate projects, including hauling contractors and others, be shown on the payrolls and paid in accordance with the minimum wage scale incorporated in the contract. It is the responsibility of the Highway Commission and more specifically the Resident Engineer to see that these regulations are complied with.

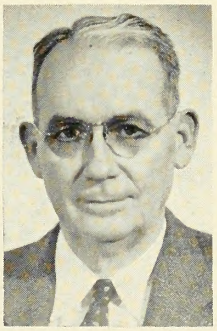
In preparing the final plans and constructing the project, sufficient time should be allowed, or taken, if you please, to insure that all items are included and completed. Basically our big problem is one of time. We are in a tremendous hurry to get the show on the road, so to speak. This, in my opinion is false economy of time. Suppose that this Highway Commission was formed as of today, and prior to this date no highways existed in the State. Other things being equal all operations would be starting from scratch. If no roads existed, then what would be the consequence if a little more time was taken to further investigate what is actually needed to construct a project by the best known engineering principles and practice?

Bridges

In the absence of T. B. Gunter, this talk was presented by L. C. Dillard.

In the early days of the Highway Program, structures were required mainly for stream crossings and railway grade separations, but for the last several years the vast majority of structures have been highway separations, or "dry bridges" as they are generally called. This development has, of course, been brought about by the greatly increased volume of traffic which has necessitated constructing such bridges in order to provide for the safe and expeditious handling of traffic at highway intersections. The number of such structures has been greatly increased by the Interstate System, on which virtually all intersecting roads are to be separated.

While all stream crossings could not be made at right angles, the skews could be standardized to a considerable extent, therefore making it practical to use a high degree of standardization for design and plans. The skews for railway separations vary widely requiring special designs and plans, but the number of such structures is relatively small in comparison with highway separations. These structures present the greatest challenge to standardization due to the wide variation in skews, combined with high frequency of horizontal and vertical curvature. This problem is being met insofar as possible by the use of standard designs and drawings for the component parts of such structures, thereby reducing to a minimum the preparation of special drawings. Where the number of special features present is such that the use of standard designs and drawings is impracticable, it is necessary to treat the structure individually in designing and preparing the plans. However, in some instances of this kind, it is possible to use standards to some extent, with resulting saving in time and cost of preparation of plans. For the designs of the most complicated structures involving curvature and skews where conventional design methods are especially time consuming, we have developed programs for use with the electronic computer which are proving to be of tremendous assistance to us in reducing the time required for producing plans for these structures. We are finding, in fact, that designs of this type can be completed in only a fraction of the time formerly required. Two bridge designers have for sometime been assigned to the computer section for the purpose of preparing such programs, and we feel that this has proved to be most rewarding in view of the results we are now obtaining and hope to obtain in the future, as the range of such programs is being expanded to cover additional design features as rapidly as needs indicate.



Gunter

It is obvious that the amount and complexity of the work of field engineering personnel is increased tremendously by skews and curvature, as more construction points are required for both line and grade due to these factors, and these points are more difficult to locate than would be the case for a 90° bridge. The contractor also finds that forms are much more difficult to construct due to these features and that increased skill is required on the part of his construction crews in order to build the forms correctly. The time required for forming is also greatly increased, and special sections required reduce the advantages of duplication and reuse of forms, which would normally be the case. In spite of these difficulties, however, bridges are being constructed in close conformance with the plans, and due credit should be given to both field engineers and the contractors for performing an outstanding job in this respect.

In preparing plans for structures, economy and convenience of construction are kept in mind, and details that will be unnecessarily difficult and expensive to construct are avoided where they are not inconsistent with design requirements. For example, in detailing concrete handrails, while it is, of course, fundamental that aesthetic as well as strength requirements be met, it is also necessary to give proper weight to the practicability of form construction and removal, as well as placing and compacting concrete. All details are standardized as much as possible consistent with necessary changes in order to avoid form obsolescence and unfamiliarity with sections on the part of contractors.

The selection of the type of structure best suited for a given location depends upon many factors, such as type of foundation material, depth of water, corrosive atmospheric conditions, height of grade lines, etc., to list only a few.

Hydrographic requirements must, of course, be met, and these often in effect determine the type of structure, as the span length required in order to avoid drift collection and reduce interference to stream flow as desired may make it necessary to use steel beams instead of prestressed concrete, which are at present not being employed in lengths in excess of approximately 72'. Accessibility for equipment would also have some

bearing on the type of spans to use, as one type would require heavier equipment for erection and be less adaptable to convenient erection from the top than another type, although either would be adequate from a structural standpoint. It is quite often necessary, particularly for major structures, to make estimates for different types and different combinations of span lengths in order to determine the most economical and suitable type of structure for a given location. Substructure types are generally dictated by foundation conditions and depth of water. Where deep water is encountered and penetrable foundation material is present, it is much more economical to use piles in order to avoid expensive cofferdams and seal coats. Where material is such that piles cannot be driven, concrete piers must be used. In some instances piles can be used for a portion of the structure and piers for the remainder. This procedure is being followed for the proposed bridge over Catawba River on NC 49 at the South Carolina line, where the foundation material at the center pier of the two-span continuous truss over the deepest portion of the channel is such that piles cannot be driven. A concrete pier is to be used here and in view of the approximately 50' depth of water, a seal coat is specified, this to be poured in the wet and the cofferdam pumped out after the seal has cured. The ends of the truss spans and the spans in the approaches are to be supported on concrete pile bents, as sufficient penetrable material is present for this type of construction, although the character of this material is such that it is anticipated that steel points will be required for some of the concrete piles.

The type of piles to be used is also dependent upon the kind of material at the site. Where sub-surface investigations indicate the presence of material that would be expected to offer excessive resistance to penetration and displacement steel H piles would, in most instances, be preferable to concrete piles.

This choice as to type of construction applies to many elements that make up a structure, and you can readily understand that time will not permit going into a discussion of this in full detail.

However, the development within the last few years of prestressed concrete members such as girders and piles, referred to briefly above, does merit a more detailed discussion due to its importance to us in providing a new construction material. The cast - in - place concrete girder bridge and the precast concrete pile have, of course, been in use since the earliest days of the highway program and have been most valuable to the designer in that they provide a dependable economical type of construction for many locations. In fact, for many years the use of the concrete girder type and steel beams were roughly comparable with respect to both volume and cost. The advent of the prestressed girder members provides us with considerably greater length than was practicable for the cast-in-place type and also offers the advantage of prefabrication at a central plant, with the attendant elimination of necessity for the construction of supporting falsework and forms for the girders at the project site. The use of cast-in-place deck girders has diminished steadily since the prestressed girders have become so readily available and this type is now used very infrequently.

The criteria developed for the design of prestressed sections are easy to apply, and members can be designed rapidly and with very little difficulty. In order to expedite the preparation of plans for structures of this type, standardization has been utilized to maximum effect in girder designs and details. While the number and arrangement of cables in a prestressed girder are dependent upon the length of span, spacing of girders, and live loading used, we have standardized the dimensions and depths of girders and are using depths of 36" and 45". This standardization for girders and piles is also necessary from the standpoint of the producer, as changes in the shape and size of section would require expensive changes in forms, with resultant increase in price of the members.

Construction procedures for this type are similar to those for steel beam bridges, in that the girders arrive at the site ready to be set in place on the substructure, although due to the greater weight of the prestressed sections, heavier equipment and different erection methods may be required. Where highway separation structures are involved and the sites are readily accessible to cranes, the erection of prestressed girders will not be very much more difficult than the I-beam, but for stream crossings, this type presents a somewhat more difficult problem than the steel, due to this increased weight; however, this can and has been done without excessive additional cost and on several projects we have specified alternate bids on both types. An outstanding instance of this kind is the Alligator River bridge, on which bids were recently opened. This involves approximately 2-¾ miles of bridge and it now appears that the low bid submitted was based on the prestressed type. Since floating equipment will be used in connection with the construction of the major portion of this bridge, the difference in weight of prestressed and steel sections is not as important as it would be at other locations. This alternate was also permitted for the Catawba River bridge previously referred to, and the low bid type for this project is the prestressed proposition.

The use of prestressed piles has also increased rapidly since their introduction only a few years ago, and as a matter of fact, the use of the piles preceded that of the girders. The prestressed pile permits the use of a 12" square section, which was not practicable for a conventional precast pile. We are using this pile extensively, and also a 20" octagonal pile. A 22" octagonal pile is used in special cases where needed due to greater lengths and loading requirements. It is interesting to note that while up until recently a conventional precast alternate was permitted for the 20" octagonal pile, bids have for sometime now been based exclusively on the prestressed type, and we have, accordingly, eliminated the precast option.

During the recent steel strike, and also during previous periods when structural steel and H piles were in short supply, with delayed delivery, prestressed girders and piles were readily available. In fact, the chronic shortage of steel and delays in obtaining delivery during the last several years have given a tremendous impetus to the use of prestressed concrete girders and piles, and it is extremely doubtful that the use of prestressed concrete would be nearly as extensive today had it not been for the dislocations in the steel industry. In connection with the use of prestressed sections, mention should also be made of the channel section, which is applicable to shorts spans. This type of construction has been used to some extent in contract work and to a greater extent by our Bridge Maintenance Department. A span of this type has been constructed by our Bridge Maintenance Department for test purposes under a joint project with State College and the Commission. The main purpose of this research project is to obtain information as to live load distribution, along with other data that will be valuable from a design standpoint.

A most interesting development in pile driving equipment has also taken place within the last few years with the introduction of the diesel hammer. Pre-

viously, as you know, timber, steel and 12" prestressed piles were generally driven with a drop hammer, and the larger concrete piles were driven with steam or air operated power hammers. The development of the diesel hammer, which is in effect a one-cylinder diesel engine, the piston of which is the striking part, or ram, has provided a piece of equipment which is self-contained and eliminates the necessity for steam boilers or compressors and which is also considerably lighter in weight. This hammer delivers energy to a pile in a much less damaging manner than a drop hammer and we have been well pleased with the results obtained by its use. There are at present two makes of these hammers in use, the Delmag D-12, which is of German manufacture, and the Link-Belt 520, which is manufactured in this country. A very well-known manufacturer of steam and air operated hammers, the McKiernan-Terry Company, has now developed and placed on the marked a diesel hammer, and it is reasonable to assume that this model will be in operation in this state in the near future. In fact, it is my understanding that at least one of our contractor's is now considering purchasing one of these hammers.

Any discussion concerning bridge construction should include some special comments on the riding qualities of bridge floors which, in some instances, are far from being as good as desired. Good workmanship in this connection is of the greatest importance, for while the public will usually get only a fleeting look at the bridge and will not notice curb and rail lines and grades, chamfer lines, and similar features, motorists cannot help but be aware of jolts at the ends of the bridge and a rough ride across the structure. The ever increasing speed of traffic also makes this feature more and more important from the standpoint of safety as well as comfort.

As you know, we have for several years been using a short section of reinforced concrete pavement at the ends of bridges for the purpose of providing a smooth transition from roadway to bridge, and this has resulted in considerable improvement in riding qualities at these points. In order to construct bridge floors to the correct grade, with minimum surface variations and the desired surface texture, it is necessary that the contractor be required to use adequate falsework and forms, satisfactory screeds properly operated, and experienced concrete finishers. It is almost impossible to overstress the importance of obtaining good riding surfaces, and while every effort should be made to provide first-class workmanship throughout, special attention should be given to this feature to be sure that the final results are satisfactory.

A further word concerning screeds might be desirable and in this connection, while we do not at this time require screeding the full length of spans with supports at bents only, this procedure is considered preferable. In any event, screeds should be as long as practicable and, in general, not less than 12' in length. In order to correct for variations in elevations, screed supports should be of a type that can be adjusted during casting operation. Very satisfactory results have been obtained by the use of screeds which extend across the roadway and progress longitudinally, and the use of this type of equipment is to be encouraged. While we have not as yet used what might be described as a mechanical bridge floor finisher, a machine of this type has been developed, and we have agreed to permit its use on a trial basis on a span of a large project now under contract. It is possible that improved results may be obtained by the use of this device, but it appears that this machine would hardly be practicable for smaller projects.

It might also be of interest to touch briefly on some additional aspects of bridge construction. While the construction of bridges is not as adaptable to mechanization as roadway work, there has been considerable progress in this direction in connection with the increased use of mechnical equipment such as power tools, cranes, excavation by means of clamshells, etc., which reduce the amount of hand labor requirements. The use of plywood for forms is in quite general use and is increasing as the contractors become aware of the fact that, while the cost of the material is greater than that for form lumber, the cost of labor for forming is considerably less. Plywood is also very adaptable to prefabrication in panels, which can be built economically and which have a high reuse life.

Due to the availability of ready-mixed concrete at practically any given bridge site, the contractors are using it widely, thereby eliminating the necessity for providing mixers, concrete material stockpiles, and personnel formerly required for mixing at the site. Its use has also the added advantage of making available to the contractor a firm price for concrete in preparing his bid.

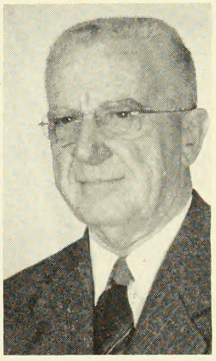
Another relatively recent development is the use of high strength bolts for field connections in structural steel members, instead of rivets. The use of this type of connection makes it unnecessary for the contractor to place riveting crews on the job. Personnel for performing this work can be trained without difficulty to handle the impact and torque wrenches which are necessary in making connections of this type. While the bolts cost considerably more than rivets, the labor cost involved for the bolts is considerably less, resulting in no increase in cost for this method, and probably in most cases some reduction in total cost as compared with field riveted connections.

The materials and procedures which I have referred to do not, of course, reflect a complete picture of developments in bridge design and construction during the past few years, but it is hoped that this summary of them has been of some interest and value to you. I also hope that it will serve to emphasize to you the fact that bridge design and construction are dynamic rather than static and that improved techniques and materials are being employed as rapidly as practicable to the end that the finished structure will represent the very best product available at the lowest possible cost to the highway user.

In Rural Areas: Highway Maintenance

By B. W. Davis

The subject assigned for this paper is "Planned Highway Maintenance in Rural Areas".



Davis

This Highway Conference and similar meetings are held to stimulate interest in the work ahead, to bring in new ideas and to discuss policies and procedures that must be followed in order to maintain and improve past achievements. As a rule, there is little that is new to be offered but repeated reviewing and refreshing our minds on things we already know is not only worthwhile but is necessary.

North Carolina Highway maintenance employees on roads, rights of way, bridges and equipment including the operating and the supervisory personnel, in my opinion, are second to none in any other department or organization. Their loyalty to work and to the men from whom they take directions, their honesty, their intelligence, their attitude and the results they obtain are all superior. However, improvement is always possible and necessary because we either improve or we go backward.

Detail standard procedures for the various phases of maintenance have been assembled in pamphlet form by the Maintenance Engineer's Office and are available. Since time will permit only a minimum of comment on details, references to these standard procedures will be omitted. Correction, improvement and modification of these established procedures will benefit by your use of them and by your suggestions for improving them. Your recommendations are not only welcome but are solicited. Your suggestions for additional items to be covered by a procedure pamphlet are also solicited.

Public Relations

A discussion of maintenance would not be complete unless the importance of good public relations is stressed. A job well done is always the first step in good public relations. A large per cent of public opinion is based on the visual impressions and the smoothness of the road surface. Hence, it is important that the proper impression be made by the appearance of the road and the right of way, and also by the activity of the personnel and the equipment working on the road. The activity of the men includes the signs, barricades and flagmen. Signs and barricades should conform to the standards and should be clean and well painted. Flagmen should have the "Slow-Stop" signal and should use it properly. The haphazard use of a red flag as a flag for signaling traffic should be eliminated. In order to maintain a smooth riding surface patches must be made promptly and with care and skill.

Regardless of the quality or type of construction all roads require maintenance from the day they are built until they are abandoned. Maintenance is necessary to offset the effects of the elements and the wear and tear caused by traffic. Maintenance is also often necessary to take care of details and items that were not included in the construction or were not properly completed during construction.

The maximum results from maintenance will be obtained through preventive maintenance practices and through corrective measures applied as early as possible after their need can be anticipated or is evident. Corrective measures should be planned in conformity with the established standards (procedures) and carried out under close supervision and by personnel experienced and trained. Patching that is done when breaks are new will be more effective and less expensive. Patches should be more effective and less expensive. Patches should be complete and correct the cause of the failure as well as the effect of the failure; retreatments and resurfacing should be done before failure has progressed beyond correction; drains should be opened before clogging has progressed to a point where damage can be expected. All maintenance activities should be timed so as to be effective in preventing or delaying failure.

Local Stabilizing Material

The maintenance of the road surface on the 33,000 miles of non-hard surfaced roads and the maintenance of shoulders on most of the other 37,000 miles of our road system require large quantities of stabilizing material. The State Highway Commission owns a few quarries, pits, deposits or fields of this type material and needs many more. Locating and acquiring deposits of this type for future use should be given high priority in planned maintenance. The sooner we acquire available deposits the less the cost is likely to be. Local material from State-owned deposits can often be hauled as far as 30 miles and still be more economical than material obtained commercially.

Loading and Hauling

Where a large amount of hauling from State-owned or commercial sources is necessary a study should be made of the type loading and hauling equipment most economical for the conditions. Maintenance and Equipment Department personnel from the Department heads down are available and should be included in this type study. Equipment most suited to the job can mean a material increase in production and economy in operation.

In line with acquiring, loading and hauling stabilizing material additional planning is now under way for more economy in quarry blasting. At the present time there are only four divisions (7, 8, 10 and 13) where there is sufficient quarry work to be materially affected by blasting cost. Several successful quarry shots have been made in Divisions 7 and 8 using fertilizer grade ammonium nitrate with 60% gelatin in blasting. It should be possible to replace at least 50% of the 60% gelatin now used. The ammonium nitrate in addition to being cheaper, is easier to handle because it is less dangerous. For dry shooting the fertilizer grade ammonium nitrate will cost approximately $80.00 per ton against $400.00 per ton for 60% gelatin. For wet shooting a specially packaged water-proof ammonium nitrate is required at a cost of approximately $190.00 per ton which is still a material saving over 60% gelatin at $400.00 per ton. The prices on ammonium nitrate may be reduced when quantity purchases are made on competitive bidding.

Paving

The Secondary road program on priority rating for paving includes all roads with a traffic count of 50 or more vehicles per day. This does not mean the gasoline tax revenue from a road with a traffic count as low as 50 vehicles per day will provide sufficient funds to pay for necessary maintenance retreatments on a bituminous surface treatment, which is a low cost type pavement. A traffic count of 50 vehicles per day would produce $85.17 annual revenue per mile from a gasoline tax at $0.07 per gallon based on a vehicle efficiency of 15 miles per gallon. (365 days times 50 vehicles per day times 7¢ divided by 15 miles per gallon). If the Federal tax of $0.04 per gallon is included the annual revenue per mile will be increased to $133.83. A mile of bituminous surface treatment requires a $1,200.00 (minimum cost) retreatment at least every six years which amounts to a retreatment cost of $200.00 annually. Hence, a traffic count of approximately 80 to 100 vehicles per day will be necessary to provide gasoline tax revenue for the necessary retreatment cost when both the State and Federal gasoline taxes are included. These figures show, based only on the revenue from gasoline tax, and there are other factors that must be considered, there are a number of miles of roads in North Carolina that cannot economically be paved in the immediate future. Hence, it will be necessary to include in future plans for maintenance a large quantity of stabilizing materials.

Prison Labor

An approach to planned highway maintenance in North Carolina would not be realistic unless consideration is

given to the problem of prison labor. All of us would probably elect to eliminate the use of prison labor, or at least materially reduce it, if such a choice were available. The prisoners are here and on the basis of funds available to the Prison Department a better use for them, than as highway labor, has not been found. The employment of 6,000 prisoners as labor may not be best for the economy of North Carolina's Highway maintenance but for the State as a whole, at least for the present and the immediate future, apparently is advisable. Where prisoners are held in confinement idleness would only create further "ferment" or deterioration and, hence, for the prisoners' well being, as well as for the good of the State, it is advisable to provide employment for prisoners. At the present time road maintenance seems to be the available work for this labor and we must plan our work to include their use to the best advantage.

The State Legislature has designated the Highway revenue (income from gasoline tax and motor vehicle license) as the source for funds to operate the Prison Department.

The Prison Department and the State Highway Commission are attempting to find non-highway uses for prison labor so as to relieve the Highway Department of some of the prison labor cost. However, finding such work is difficult. The prisoners that require close guarding (close custody prisoners) are the prisoners less desiriable for highway work and they are also less desirable for other types of work. The Prison Department is enlarging prison industries, farming activities, forestry and lumber activities, and some prisoners are employed by other State departments and by municipalities. The State Highway Commission gives first priority for prison labor use on other than highway work to encourage this additional use of prison labor in order to reduce the cost to the Highway fund.

There are two items of maintenance and two units of equipment that appear to be worthy of attention.

Ribbon Type Edge Reinforcement

The first covers a preventive maintenance by the application of a ribbon-type reinforcement along the edge of a bituminous surface treatment. The section of a surface treated road along the edge of the pavement usually gets the least amount of asphalt per unit of surface because there is no doubling of the application at the edge and because the asphalt applied here comes from the end of the spray bar. This edge of the pavement is also usually supported by a soil type shoulder which is often a pervious material and, hence, permits water to seep under the pavement edge. The theory is also suggested that bacteria from the damp shoulder eat the asphalt at the pavement edge (this might be a good excuse for some failures). All of these conditions contribute to the need for reinforcement at the edge of this type pavement.

One example is a secondary road in Sampson County. The patch mixer and strike - off spreader were pulled in tandem by a 2-ton dump truck. Similar edge reinforcing jobs have been done in other counties with materials ranging from a sand seal to sand asphalt prepared in a "hot mix" asphalt plant. The pre-mixed material when available is recommended for this type work. The use of a pre-mixed material from a central mixing plant will furnish a better material, will greatly increase production in linear feet of ribbon-type reinforcement per day and, hence, reduce the cost per square yard.

The "strike-off spreader" used in Sampson County is home-made from 8-inch drag blades. The "strike-off" places a wedge-shaped section that is thick at the outer edge or shoulder and is feathered at the inner edge. The "strike-off spreader" is non-rental equipment but is shown in the cost data at a nominal cost of $1.00 per day.

Several other districts have "strike-off spreaders" similar to this unit.

The ribbon-type edge reinforcement is recommended for use where pavement edges show signs of weakness or possible future failure. It can also be used to correct a difference of elevation between an old pavement and awidened section where the widened section is depressed by settlement or from other causes.

The cost of the application referred to above at ten cents ($0.098) per square yard is low because the sand was purchased by the acre and not by the ton and the quantity of material used, 29 pounds per square yard, was low. On another job the width of the ribbon type treatment was increased to as much as four (4) feet with the same type of equipment. The quantity of bituminous mix will probably be more per square yard on most applications.

The recommendation that when available plant-mix material be used for bituminous ribbon type edge reinforcement applies also to material for use in making bituminous patches. It is usually possible to get better and more economical results by using plant-mix material for patches than by using cold-mixed materials.

Subdrains for Maintenance of Pumping Pavements:

The second is a maintenance procedure for combating pumping slabs of a rigid pavement. The subdrains (frequently referred to as sand drains, blind drains or French drains) are being installed on NC 211 between Bolton and Council in Columbus County by forces under District Engineer E. L. Green.

The cost of this work depends on the quantity (number of miles of pumping pavement and the number of pumping slabs per mile). During an 8-hour workday the trencher recently cut 40 trenches 6 inches by 24 inches deep by 15 feet long, or 600 feet of drains through shoulders where there was 6 inches of a crushed stone base with bituminous treated surface. The trencher cost $1,300.00 and will rent for $150.00 per month fully operated less operator.

One example is a 4 - inch trench cut at the pavement edge and to a depth of 1 inch to 2 inches below the bottom of the pavement slab. The 6 inches to 8 inches in the lower part of the trench is filled with sand which approximates the grading and quality of a sand for Class A concrete. The top part of the trench is back-filled with the shoulder soil excavated by the trencher. The top part of the backfill should be made with a material as near impervious as practicable.

The outlet drain through the shoulder is similar to the parallel drain and is cut with a fall from the pavement base to the side ditch.

Lube Truck

You are familiar with the Lube Truck used to service equipment which is not brought to the maintenance headquarters at the end of each day and, hence be serviced on the job.

It is possible that you do not realize the value of this unit to maintenance operation. In my opinion it is one of the most valuable pieces of equipment in the maintenance fleet.

The work of designing, assemblying and improving this unit has been done during the past eight years under the direction of Mr. G. A. Brinkley and Mr. J. W. Upton. These two men deserve credit for this added efficiency to North Carolina's maintenance program.

The second piece of equipment is the tractor-mower; a tractor with both a rotary blade driven through a power take-off and a sickle bar blade driven by a hydraulic motor. This combination will cut a swath up to 13 feet wide. It will play an important part in plans for future right of way maintenance. Cost records show that the use of a rotary mower on shoulders and to cut right of way areas will be more economical than the sickle bar mower or hand-cutting by prison labor. Clearing and grubbing will first be necessary in the areas where you plan to use a rotary mower.

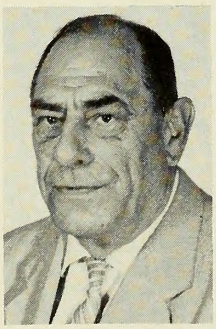
The use of a rotary mower also adds a safety feature by making it possible to mow shoulders with the entire mowing unit including the tractor on the the shoulder and off of the pavement at all times.

Mr. Geo. A. Brinkley deserves much credit for the use of this type combination mower.

Highway Drainage

By W. S. Winslow and C. R. Edgerton

The importance of drainage on a road has been long recognized, but even so, a large percentage of the failures on all types of roads is caused by inadequate drainage facilities. This may be improper drainage of the roadway section itself, too low a grade line, or structures not large enough to pass flood flows without damage to the road. Under present conditions it is even more essential than ever that adequate drainage facilities be provided because of the increased amount of traffic and heavier loads that the roads must carry, and the much greater importance of this traffic to our general welfare.



Winslow

In this paper we are not attempting to cover flood flows from the larger streams, which require bridges. It is limited to drainage from the roadway and small streams, giving the methods used for determining size of structures and preparing drainage layouts for both rural and urban areas, and information obtained from many investigations of drainage complaints and failures.

To provide a satisfactory drainage system for any road, it is essential to determine where the drainage will accumulate, where outlets can best be provided, and how much flow can be expected at each location. The first two of these can be determined best by field survey at a time when there is sufficient flow to make these apparent. Unfortunately, many surveys must be made when this flow is not available, and they must be determined then by levels and indications of past flows. This requires considerable experience on this type of work.

The amount of flood water coming to any structure is entirely dependent upon the area which drains to it. The size, shape, slope, and land use of this area, all affect the amount and velocity of this flow, and all must be taken into consideration in determining the proper size structure. These different characteristics of drainage are determined from field surveys or observation on very small areas, and from available maps or aerial photographs whenever the areas are large enough to be detected on these. The aerial photographs are very valuable for this work because they also show many details, especially as to land use, that are difficult to obtain from other sources.

In much of our work, after the characteristics of a drainage area have been determined, a formula is used which gives directly the area of waterway required for this drainage area. In other cases, the expected discharge from the area is computed, and the structure size selected which has sufficient capacity to safely pass this amount of water. The different formula used contain a factor which must be varied to take into consideration the different characteristics of the particular drainage area. The selection of the proper factor, or constant, to be used in the formula for different types of areas is the key to the results obtained. They have been determined in the State by many years of observation and study of the behavior of structures that have been subjected to flood flows.

The most valuable means of determining runoff from a watershed is gage records. We have some gages in North Carolina which have been in operation for many years and provide valuable, reliable, information. However, most of these are on the larger streams, and information on smaller drainage areas, at this time, is not extensive. We now have a co-operative program with the U. S. G. S. for determining runoff from the smaller areas. This program consists of collecting data from 120 crest stage gages which have been installed at selected sites over the entire State. It has been in progress for about 8 years, and we are just beginning to obtain usable information. As the period of record on these smaller streams increases, the information will become much more valuable.

On drainage surveys accurate elevations of previous high water level is obtained, except at locations requiring small pipe lines, as this controls the height of the grade line. It also is necessary where multiple pipes or box culverts are required in order to select the correct height to span ratio. After the size of the opening required has been determined, the type structure which will be best and most economical for that location and method of construction is selected. Generally, either R. C. pipe of standard or extra strength; C. M. pipe, plain, coated, or paved; structural plate C. M. pipe; or R. C. box box culverts, are used.

Where high fills are encountered over small drainage structures, structural plate pipe is generally used. The maximum height fill under which one of these has been placed is about 180 feet. Special bedding and backfill methods and materials are often required for these installations, and they are sometimes elongated by shop forming before erection, or by timber struts after erection and before backfilling. Where possible they are located in a trench on the side hill, to decrease the length of the line and also the height of fill above them.

The location of a structure is usually determined in the field by the survey party, but sometimes this is adjusted after the office studies show it to be advisable. A structure should be located in such a manner that it will pass the required discharge and provide the most economical installations, considering

possible scour to the roadway fills and damage to adjacent property as well as the cost of the structure. In general, except on steep slopes where side hill locations are used, the proper location is approximately in line with the high water flow and on the grade of the natural channel, or as closely thereto as other considerations permit.

In establishing grades for pipe lines, care should be exercised, particularly in flat country, to establish the grade of the natural channel before laying the pipe. A pipe installed at too low an elevation will require more tail ditching than is actually required to drain the project, and sometimes presents an almost impossible situation to provide drainage from the structures. There have been many incidents in which the property owners have objected to the deepening of outlet ditches, and in some cases this has been grounds for damage claims. Also, if a ditch is lowered by highway construction or maintenance forces the property owner considers that it is the responsibility of the Highway Commission to maintain this forever.

We are responsible for providing adequate structures to pass stream flows through the highways, and for drainage of the highway itself, but there is growing sentiment over the State that whenever highway drainage is involved the Highway Commission should be responsible for all improvement and maintenance. It is, and should be, the Commission's policy to do its full share of drainage work, but not all of it. A fair proportion of costs would be based on the ratio of highway right of way to the cleared or improved land within the watershed. In most cases, however, it is recommended that the Highway Commission do more than this proportion, in order to give the private citizen the benefit of any doubt.

Usually in the construction of a project it is necessary to clean out tail ditches for good drainage. The rising cost of labor has made it more economical to do this by dragline instead of by hand. Therefore, most of the original small, hand cut ditches end up three or four times their previous size. This, in itself, causes many of the property owners to believe that more water is being turned across his land, and in some instances complaints are made from other property owners located a mile or more downstream from the end of the improvement. In order to eliminate as many drainage complaints as possible, particularly on new construction, it is advisable to enlarge outlet ditches only when this is necessary to properly take drainage away from the highway.

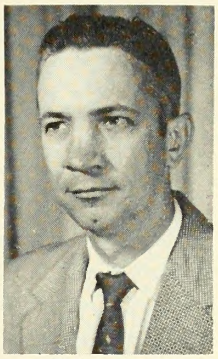
Scour in roadside ditches is often a maintenance problem. The amount of scour is dependent on the type of soil, the slope of the ditch, and the amount of water carried. In making drainage layouts for new construction, this is given consideration, and where possible, outlets are spaced to keep scour at a minimum. When necessary, scour protection such as riprap or paving, is recommended.

Special consideration is given to median drainage on dual lane projects. In general, the inlets in the median are spaced to eliminate the need for paving these ditches. The inlet spacing varies, depending on availability of outlets, from an average of about 400', to a maximum of approximately 900 feet. Where grades are such that scouring will occur, paving of the median ditches is recommended. During construction scouring often occurs in some newly graded and unsodded ditches that will not need any other protection after vegetation has started. If these are paved, a year or so after the project is completed they have become silted in and vegetation is growing over the paving, which indicates a waste in ditch paving.

Urban Draining

On all State Highway projects in urban areas, adequate storm sewer systems are provided where needed. These are designed to carry a discharge equal to the runoff from a rate of rainfall of three inches per hour. The runoff, based on experimental studies, amounts to from about 35% of the rainfall on areas subject to only slight development, to about 70% on highly developed, or business areas. The possibility of future additional build up within the areas is taken into consideration insofar as possible.

In working out the drainage systems a plan and profile layout of the project is prepared, and checked in the field, to determine where and how much drainage outside the street section will come to this system. Catch basins, or drop inlets, are then located on the layout at the points where drainage pick ups are needed. These are spaced in general at every street intersection, or about 400 feet apart, with additional ones as needed where outside drainage will be brought in. They are located so as to eliminate insofar as possible any large amount of flow across pedestrian walkways at street intersection, and where they will not interfere with entrance drives.


Edgerton

The capacity of curb type inlets is dependent on the grade of the gutter approaching the inlet and the amount and shape of the depression in the gutter at the inlet. Generally full gutter flow is not desirable because it causes flooding of the pavement of flat crown sections. For this reason, the designer does not provide for gutter flow. This provides a factor of safety for increased discharge in the system for storms which may occur greater than the design frequency. A 15" concrete pipe on a .5% grade will transport approximately as much water as three standard curb inlets will accept with full gutter flow.

After the inlets have been located, the best location and grade for the main collecting line is determined. This is often difficult because of other pipe and conduit lines already in place under the street. The amount of flow estimated to be picked up at each inlet is determined. Starting with the inlet farthest away from the outlet, the proper size for each connecting pipe to take care of the accumulated flow, is determined. Pipes should be laid on grades not less than 0.4% if posible, to prevent silting. Manholes are provided on the main line where connections are needed at points outside the catch basins.

The problems encountered in highway drainage on completed projects are many and at times complex. However, they may be divided into two general categories: first, where improper or inadequate drainage adversely affects the highway, and secondly, where the adjacent property owners feel that the highway drainage is adversely affecting their property.

In the first category, the most frequent cause of the trouble is a structure too small for the discharge from its drainage area. This condition may be created by any one of several reasons; the original determination of size may have been in error; the runoff characteristics of the drainage area may have changed considerably since the installation was made; increased traffic use of a road may have changed its drainage

requirements, as on heavily traveled arteries it is desirable that no flooding occur.

When investigating problems of this nature, the first step is to accurately determine the size of the drainage area and its runoff characteristics. If these do not indicate a larger structure, the inlet and outlet conditions should be examined. In some cases the improvement of these conditions will eliminate the trouble. There are some installations where merely providing a good inlet will increase the structure carrying capacity over 25% with no additional head required. Of course, many of these investigations reveal structures which are too small and these are adjusted or replaced.

Another problem often encountered is improper drainage of the base of the road. This may be due to improper maintenance of the ditches and shoulders which causes saturation of the base from surface water. In these cases the cause is easy to cure by restoring adequate ditches. If, however, the base is being saturated by capillary action from subsurface water the problem is not as simple. If the location and pitch of the strata carrying this water can be located, the trouble can be eliminated by installing subdrains in the water bearing strata to cut off this flow before it reaches the base. There are also conditions where the base is composed of impervious soils which are not adaptable to drainage by standard subdrainage methods. When these materials are encountered it is necessary to undercut the subgrade and replace with a porous material which will drain.

Let's consider now, a few of the various complaints in the second category where the property owner believes the highway drainage has adversely affected his property.

A frequent one, is the belief that the highway structure is too small and causing backwater on his property. In some of these cases the complaint is well founded, and the structure should be enlarged. In many others the structure is adequate, but after a few dry years the property owner constructs buildings or makes improvements on land below the natural high water elevation of a stream. When a flood comes, these improvements suffer damage, and inadequacy of the highway drainage is claimed. Also, many people, who are ignorant of the flood conditions along streams, buy property and build within the flood plain, then expect the Highway Commission to provide relief after flooding occurs. Sometimes it would be possible to lower the high water in these cases by enlarging and deepening the channel, but in many instances the cost of these improvements would be more than the value of the property. Moreover, it should not be the responsibility of the Highway Commission to provide relief in cases where ignorance of natural flooding conditions is the cause of damage.

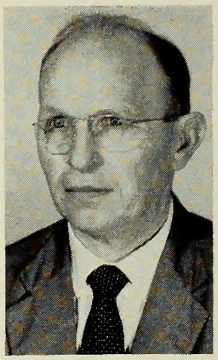
One of the common complaints from property owners, particularly after new construction, is that more water has been released on his land than flowed across it before. In many cases this is true. Due to improvements on the watershed and paving of large areas, the rate of runoff is increased. However, it is within the rights of any property owner to make improvements which increase runoff without being liable to the property below. If, when making these improvements, any diversion of water from one watershed into another occurs, liability is created.

There are some places in modern highway construction where it is almost impossible to prevent diversion to some extent. These occur mainly where long grades cut across ridges, and where grades of intersecting highways are separated. In most of these cases no unsatisfactory conditions develop from these diversions, which are usually insignificant when compared to the total areas. Recently, the public has become more aware of the fact that diversion creates liability, and in some complaints, diversions are claimed where none exist. It is most important, however, that in either highway construction or maintenance work, no diversion of water from its natural outlet be made unless this is absolutely necessary to provide satisfactory drainage.

In conclusion, it is hoped that the things which have been discussed in this paper have been of interest and of some value to you. If there are any questions regarding drainage on which you desire more information, your Hydrographic Department will be glad to work with you in seeking solutions.

Planning For Utilities Along The Highway

By J. G. Gibbs



Gibbs

Since the days of the Caesars, public roads have played a prominent part, not only in the moving of armies, but as a means of communication between the armies and the home bases. In this industrial age or atomic age, as some might refer to it, the importance of the road has not diminished, but has increased tremendously. In the early days of civilization, the roads were used for hauling water in water carts or carrying it on the person. How interesting it is to let our minds wander back into the Middle Ages when the town crier brought news to the people along the highways. We point with pride to Paul Revere's ride down the New England countryside, as he transmitted the news.

We do not have to think back too far to the time when roads were used for dumps and for the disposal of garbage and sewage of all types. The roads of today are far superior to the early trails that served that purpose. Likewise, the means of communication and transportation have changed in our day as water pipes, sewer lines and pole lines have replaced the crude so-called utilities of earlier days.

Why were they permitted to use the highways of that age? Why are they permitted to use the highways of this age? Not being an attorney, perhaps I should not attempt to elaborate upon the legal aspects of this use of high-

ways and streets by utilities; however, as I understand this use, it dates back to the old common law of England: that a public way was dedicated for a public use, more or less of a public trusteeship. In our own state, the right of a utility to occupy a state highway or street is not a right granted by the Constitution but by Legislative authority. The purpose behind it being to encourage the public welfare. G. S. 56-1 gives authority to power and communication companies to occupy the state highways and streets as follows: "Any person, firm, or copartnership, operating electric power lines for lights or power, or authorized by law to establish such lines, or any duly incorporated company possessing the power to construct telegraph or telephone lines, lines for the conveying of electric power or for lights, either or all, has the right to construct, maintain and operate such lines along any railroad or other public highway, but such lines shall be so constructed and maintained as not to obstruct or hinder the usual travel on such railroad or other highway." G. S. 118 gives to the State Highway Commission the right to regulate this occupancy. As I interpret the intent of the statute, this right is not granted for the benefit of the corporation or occupant, but for the use and benefit of the public at large.

The question is often asked: Why should right of way be bought at the public expense and furnished to the utility companies without charge? Have you ever stopped to consider the question that the utility companies might ask; namely: Why should we be called upon to pay for the bypass that is built primarily for the trucking industry? To me it makes sense. Our Governor and the Department of Conservation and Development are doing a tremendous job toward selling our state to industrialists, not only in the United States but in other parts of the world. There must be roads—there must be utilities—if we are to furnish the area for the industrialist to locate when he comes to our state.

In this expanding age, the interest of the public at large demands more and better roads. If we in the Highway Commission are unable to cope with the demands of the public, then we will be called upon to explain the reason why. Likewise, the utility companies are called upon to cope with the demands of the tremendous surge in development that is taking place along the expanded system of roads. This expansion calls for complete cooperation between those designing highways and those designing an efficient utility system. To me, there must be, particularly in our urban areas, a coordinated system. This can be accomplished through cooperative effort on the part of the State Highway Commission and the utility companies. I am convinced that through this effort we can come up with a highway system that can meet, not only the needs of the traveling public at large, but the needs of the residential and industrial areas that are springing up along these improved highways. After all, it is the rate-paying public that is paying approximately three quarters of a cent per mile gasoline tax and also footing the utility bill.

A tremendous responsibility has been thrust upon the Highway Commission to design and build highways to meet these demands. This certainly calls for the exercise of good personal judgment in the expenditure of the funds that are entrusted to us, and we must not take the responsibility too lightly.

I see that I have utilized practically all of my time in discussing the necessity for the utility companies to occupy the rights of way and the importance of liaison between the Highway Commission and the utility companies in the furtherance of the expansion of our highway system and the utilities system throughout our great state. I have left very little time to discuss the solution to the problem, which certainly falls in the realm of design.

First of all, let us consider the subjet from the standpoint of strictly rural roads. There is very little problem with utilities on this type of road. Since the Legislature has given to the utility companies the right to occupy the right of way, it is necessary for the Commission to permit this occupancy when it does not interfere with the use of the road for travel purposes. On roads falling in this category, the utilities, being primarily longitudinal, can be placed along the outer edge of the right of way, which does not interfere with the maintenance of the roadway. Occasionally, the problem arises as to the economy of moving existing utilities along some of these rural roads that are being improved, and the decision has been made to leave them on the right of way, in some intances within the backslope. Certainly, this is not a good practice, and creates quite a problem from the maintenance standpoint; particularly, in the mowing of the right of way. Quite a few of the utility companies are plowing in cable along the shoulders of the rural roads instead of using an aerial-type cable. The main problem created here is the additional maintenance required on the shoulders immediately following the installation of such a facility. Then, of course, there is the continuing problem of digging into the cable to provide service for new customers along the highway. This problem is with us, though, and it cannot be eliminated.

There is one other problem on rural roads, or roads in the rural areas, this being aesthetics. It seems that the utility companies have removed this word from their vocabulary.

The main problem of utility occupancy along highways and streets is on those arteries through the municipalities and in the urban areas. It is here that serious consideration must be given to the design problem. Mr. T. B. Gunter, Assistant Chief Engineer for the Highway Commission, has given to us an excellent example of what can be done through planning for utilities. Early in the planning stage for a bridge, contacts are made by the utility company, and provision is made for the accommodation of utilities upon the bridge. Through liaison between the utility companies and the Highway Commission, this same procedure can be worked in the design and construction of the roadways and streets, particularly in the urban areas. It just does not make good sense to design an urban section and provide a strip of one to one-and-one-half foot in width on either side of the road for the accommodation of all of the utilities that are to serve the people along the road. The net result of such a design is that it becomes necessary for pipe lines and conduits to be placed under the roadway proper, and then in future maintenance, or expansion of the facilities, there is the continuing problem of cutting the pavement to gain access to the utilities. In the case of the bridges, the additional costs involved in accommodating the utility companies is borne by them. The additional costs for providing adequate space for utilities along city streets or roadways in urban areas should be the responsibility of the utility company and/or the municipality. And while I am not in a position to speak for them, I am of the opinion that they would gladly assume the responsibility of paying for this additional width. The question readily arises as to whether the placing of the utilities along the highway would impose an additional burden upon the property legalwise. I do not have time in the few minutes alloted me to go into this phase of the question; however, I

will say that in most instances, the State Highway Commission has the authority to grant permission for the location of the utilities along the right of way. Please observe that I said in most cases.

How shall I sum up what I have said? By saying this: To me, the roads are built to serve the public. To me, the utilities are installed to serve the public. You and I, the people, pay both bills. There should be liaison between the Highway Commission and the utilities to work out these problems in the planning stage and both the Highway Commission and the utility company should pay their proportionate part.

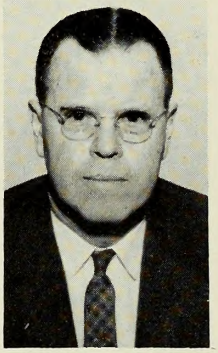
Designing A Roadside For Maintenance, Looks

By Frank H. Brant

It may seem strange to you that the phrase "Designing a Roadside" is included in the program for this maintenance session of the Highway Conference. Generally, and I might add too often, design is considered as a stage of highway operations which ends before construction starts; and therefore is well separated from maintenance activities.

However, the theme of this session is "Planned Maintenance" and I hope to be able to convince you that the maintenance man has an important part in designing a roadside for maintenance and appearance when the word "design" is used in a broad sense. When I use the term "maintenance man" I am not limiting it to those listed under the accounting codes for districts; I am speaking of all Division and District supervisory and field personnel, including Landscape, Traffic Services and Road Oil personnel - everyone joined together to get the big job of maintenance done.

First of all, the maintenance man can be of assistance to the designer. It is the maintenance man who knows better than anyone else those items which slow down maintenance operations; or make the operations more difficult or more costly. When the subject of roadside design is brought up, the first through is that of slopes; that flatter slopes improve appearance and aid in maintenance. This indeed is a big and important item, but there are in addition many little items - bothersome little items - each of which may be minor in itself but when combined bring about a big maintenance headache. It is in this field of little things that too often in the rush of initial design—or in the midst of the big quantities, big equipment and big operations of construction—the simplest decision is to "let maintenance take care of it". It gets to be rather rough on maintenance at times, but has the maintenance man really been taking his part in design by making suggestions? Not just a generalized gripe that "something ought to be done", but specific suggestions supported by reasons and by costs if possible.



Brant

I'd like to make suggestions on some of the little things that could improve roadside maintenance and appearance. If you disagree, I would certainly like to hear from you.

Slopes flattened as much as economically feasible are a great aid in maintenance and appearance of roadside but the full value of the flatter slopes cannot be realized unless slope intersections are rounded, transitions made smoothly between cut and fill at grade point, and wing ditches in the vicinity of grades points shaped so that equipment can cross them. Frequently there are areas at the outer edges of rights of way which should and could be mowed with equipment if it was just possible for the equipment to get to the areas with reasonable ease.

Berm ditches built to a V-type cross section flat enough to cover with grass surely can be maintained more easily than straight sided narrow berm ditches so susceptible to severe erosion.

How often is the mowing of long flat areas of roadside interrupted by the steep sides of head ditches and tail ditches? It would seem relatively simple to provide in design and construction for the slopes of most of these ditches to be flattened so that mowing equipment could operate across them. In many cases the same flattening requirement could apply to lateral ditches at fills and to channel changes.

If very narrow median strips, or small islands at channelized intersections are capped, costly and sometimes dangerous maintenance of very small grass areas can be avoided. Maintenance of grass around delineator posts at the edge of curbed island is a slow and costly process. Would it not be desirable to cap over a small strip adjacent to the curb, thus having the delineator posts surrounded by surfacing instead of grass and having the inner part of the curbed island readily accessible to power mowers?

When permanently curbed islands are being constructed on top of old pavement, grass establishment and maintenance will be much easier if the old pavement is removed from beneath the island. Such pavement removal is expensive. Will the one-time construction cost be offset by savings in year after year maintenance and by freedom from water seeping onto the traveled way from a water-logged curbed island? I don't know but advantages and disadvantages should be weighed and a decision made to govern this design item in the future.

Greater use of catch basins to eliminate deep, steep-sided holes along the roadside builds into the highway greater safety and improved appearance. These items are costly, but can it not be proven that in the end they also are more than paid for by savings in maintenance costs?

Likewise, greater use of surfaced ditches adjacent to catch basins as well as elsewhere along the highway seems justified. I sometimes wonder if the heavier types of paving for ditches is required in all cases where some type of ditch surfacing is desirable. Here is a place where the maintenance man can be a designer by trying, observing, and making specific recommendations from his experience with type, size, and shape of ditch surfacing.

These are really just samples of the many little things in design which can aid in maintenance and appearance. I could add many more and maintenance personnel could probably describe enough additional items to fill a book. Some of them could easily be included in contract work if recommended and justified. Others which do not lend themselves to contract construction should certainly have a part in planned maintenance.

It would never do to sidestep the chance for an argument about tree and shrub plantings along the roadsides. Most likely many of you are thinking about how I have been talking of ways to reduce maintenance and yet propose tree and shrub plantings that add to maintenance. I well know that to most maintenance men newly planted trees and shrubs are worrisome warts on the face of the highway. I also know of established plantings where a little patience in maintenance has resulted in a roadside appearance of which the maintenance man can be proud. Trees and shrubs are an important part of overall roadside appearance and if correspondence reaching my office is any guide, there is increasing public demand for plantings. Elaborate or continuous plantings cannot be justified any more than guard rail on every highway fill can be justified. On the other hand, I do not believe that it can be said fairly that no trees or shrubs should be planted because of maintenance costs than said fairly that no guard rail should be erected on any fill because of maintenance costs.

I will be the first to admit that I have been responsible for some mistakes in planting design in the past which have added unnecessarily to maintenance costs but I sincerely believe that we are profiting from past mistakes and at the present time we in the Landscape Department are working on planting stanards aimed at giving the desired landscape effect without undue maintenance burden.

Some plantings most bothersome from the maintenance standpoint have not been mistakes, but deliberate designs for a specific purpose which was considered important enough to disregard maintenance problems. I refer specifically to interception of opposing headlight glare by plantings in medians and in the areas between the through-traffic roadways and frontage roads. Are we or are we not going to provide headlight interception in the future? Safety considerations will have to be weighed against maintenance costs. If it is decided that screening is needed, then plant maintenance cost will have to be accepted, and in addition the median cross-section designed to accommodate screen planting in a way to reduce the maintenance cost that cannot be eliminated.

In years past there have been a wide range of remarks concerning roadside planting. On one extreme is the arbitrary statement that "the only way is not to have a single tree or shrub on highway right of way". On the other hand, there have been helpful comments from those who had been thinking about the design of a modern and complete highway. One example is the comment, "if you will space trees farther apart we will be able to operate mowers between the trees". Obviously, the latter comment is the helpful one; the maintenance designer is helping the landscape designer.

I have devoted considerable time to the maintenance man's role in the field of design that is primarily the responsibility of others. Let us assume now that a well designed and well constructed project is turned over to maintenance with a very minimum of things to be "taken care of by maintenance". In planning the maintenance for this newly constructed project the maintenance man is a designer in his own right, designing and planning the type of maintenance operations and the procedures to be followed to provide the most satisfactory maintenance and the most attractive appearance of the roadsides. The maintenance man is at the end of the line. He cannot turn the highway over to someone else. It is his responsibility, not for just six months or a year, but for year after year, and in planning for maintenance it would be well to visualize the "finished product" after the newness of construction has disappeared. Quite often a little extra maintenance immediately after construction will pay off in lessened maintenance in later years. One example of this is the giving of a little extra care of fertilizing and patching newly established grass cover to prevent even a small failure from developing into a serious erosion problem.

Obstructions to mowing have been mentioned previously, but increased area of mowing is a problem as well. Does it not make sense to do a little designing to establish mowing patterns that will reduce mowing area? One way is to allow steep inaccessible portions of the right of way to go back to woodland. Even where slopes are not steep many areas can be allowed to revert to woodland. A good guide to determination of such woodland reestablishment is the adjacent land use. If adjacent land is wooded or wasteland, why use mowing efforts to clean the entire right of way? There are many places, where adjacent land is in cultivation or in a state of high development, that needs available mowing effort more than woodland and wasteland areas. I feel that half a roadside in unmowed natural growth (or some seeded cover such as sericea lespedeza) and the other half well-mowed gives better appearance and makes more maintenance sense than the entire roadside mowed infrequently and therefore always half-ragged looking.

Where areas of highway right of way adjacent to agricultural cropland cannot be mowed the problem of complaints about weeds is very likely to arise, but I am hopeful that current research will point a way for use of herbicides to help out in this weed situation as well as in the control of unwanted woody growth.

You may well be thinking that these suggestions are all well and good for some of the most recent highway construction but that you are also concerned with the miles and miles of older highway with steep eroding slopes, areas which cannot be maintained with equipment, and the continual regrowth of brush. In the course of routine maintenance there is generally an opportunity to correct some of these bothersome conditions little by little. As a planner, don't be pessimistic. It is the height of pessimism to say "we have too many miles of steep slopes to even think of changing them". Even if only a hundred yards can be corrected at any one time, that is just a hundred yards less of roadside to worry with erosion. As a designer, design for lasting results. Much is gained by flattening and rounding slopes, but more is gained by carrying the flattened slope uniformly from the ditch line instead of grading a broken-backed slope with the upper part nicely flattened and the portion next to the ditch still vertical.

The best possible design and the best possible contruction of a highway roadside is not enough. A roadside needs thorough maintenance just the same as surfacing and drainage structures need maintenance to keep the entire highway safe, useful and attractive. To the maintenance man it is a day after day and year after year job. Considering himself as a planner and a designer of maintenance could help to make him more of a magician with his maintenance budget.

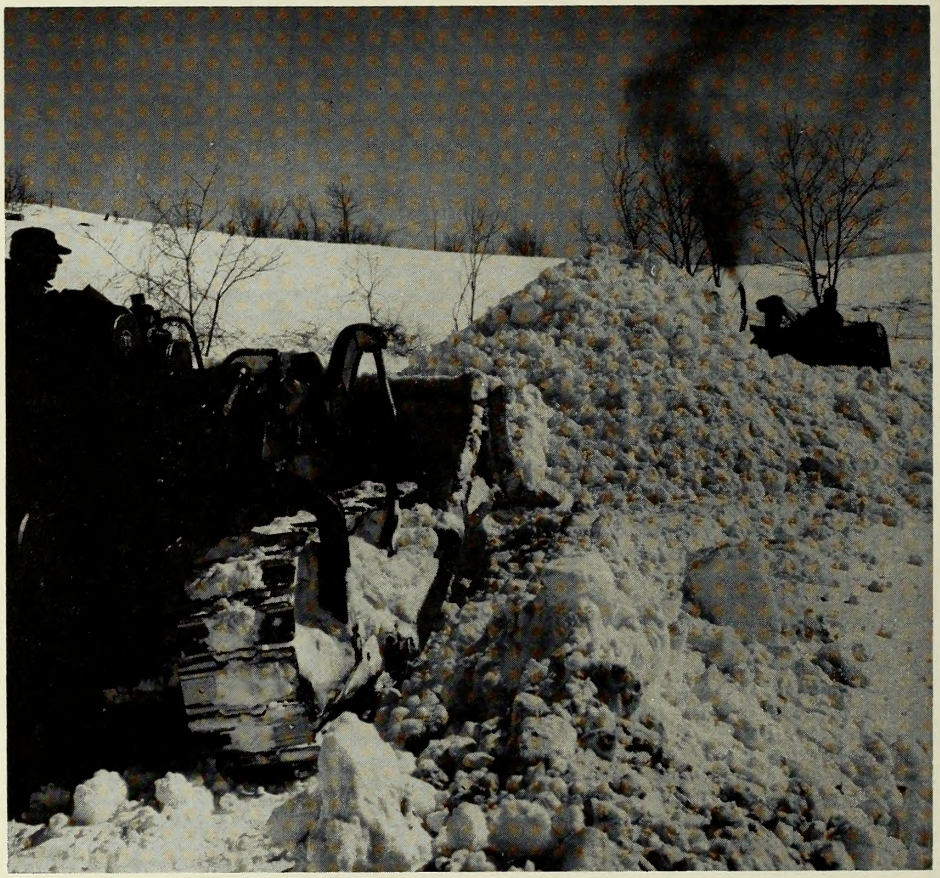
N. C. S. H. P. E. A. Association News

VOLUME 9—EDITION 2 MARCH-APRIL

INCREMENT SCHEDULES — Elsewhere in the magazine is an article with information pertaining to revision of the increment schedules, revised schedules as to beginning or effective dates under the bi-weekly payroll system. This revision is a very definite advantage to the employees receiving increments, and we are all very grateful for the changes approved by the Personnel Department and the Controller's Office. The effective dates have been advanced several days in each instance, which will mean more in the amount of actual salary received by each eligible. We offer our thanks to all who made this revision possible.

FINAL INSURANCE EXPERIENCE for the policy year ending September 30 shows a total premium paid of $1,051,-092.63. The total return to us in claims was $986,402.17. This is a return of 93.8% of premiums paid, which is 3.3% more than the guarantee of 90.5% under the old contract year. This means some reduction in the amount of reserves set up, and indicates once again the necessity of the slight premium increases that were recently made effective, needed in order to build reserves so that our policy will be actuarially sound.

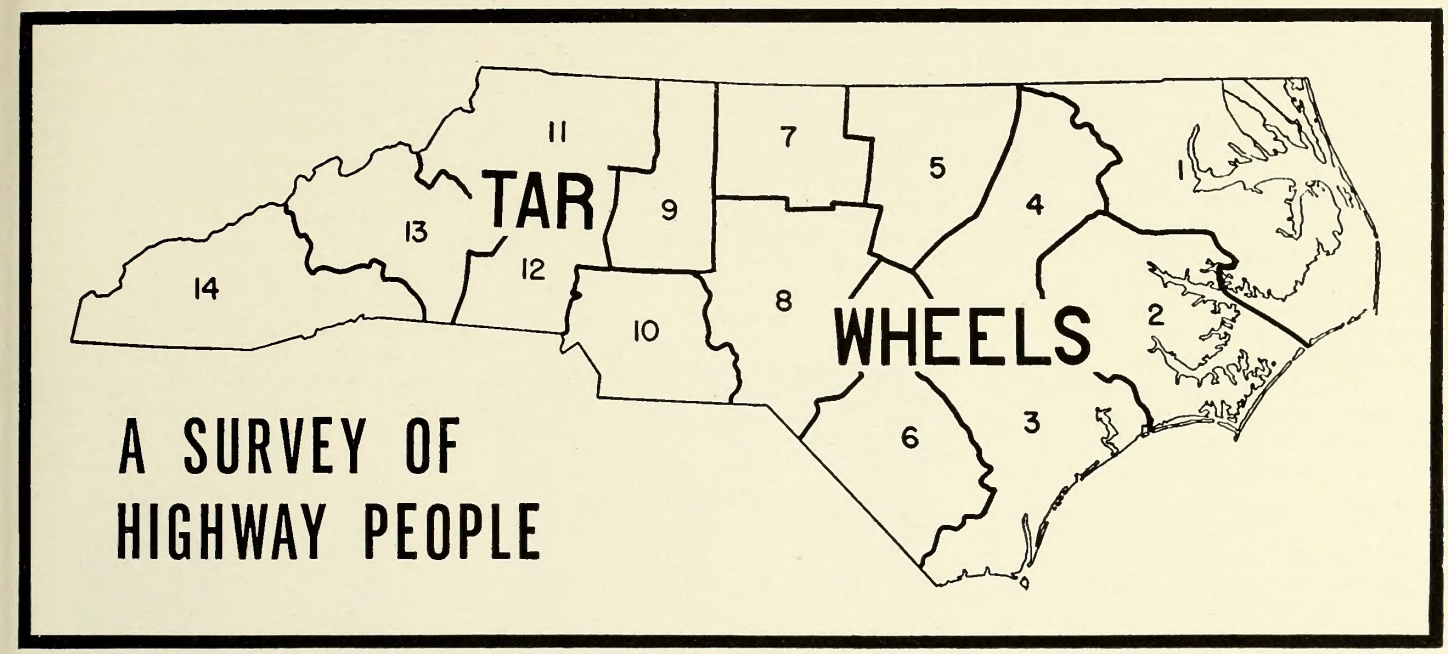
EVERY EMPLOYEE should vote in the coming primary of May 28 and the general election on November 8. It is a duty and a privilege to cast a secret ballot in this free country of ours. Those who do not vote forfeit their right to criticize those elected. Of course, you cannot vote unless registered to do so-and everybody should be certain of registration. Make your own decision as to the candidate you wish to vote for but REGISTER AND VOTE in order to take part in good government. This is our business, let's attend to it. - - Otis Banks, Secretary



MEETING ON THE MOUNTAIN—A dozer and front-end loader moving up the mountain from two directions cleared this Watauga County secondary road. Both pieces of equipment were rented from a private construction firm in Boone.



Scenes here are from recent NCSH&PEA meetings. The picture at the left shows a portion of the head table at the Construction-Division Office Chapter—Unit 6. Second from left, Chairman Rudolph Guirkins presides at the Beaufort County meeting. Second from right, general view of the diners at Wayne County meeting, with chairman Bob Dawson in foreground; and right, Leon Thomas McMillan, son of J. T. McMillan, presents a poem at the Pender County meeting.



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

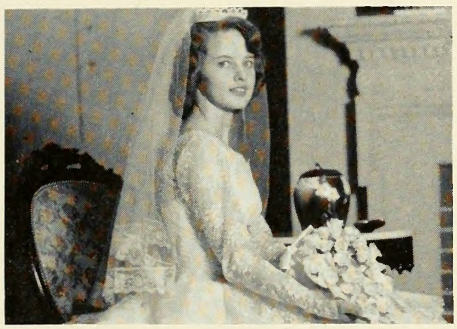
Division Correspondent

ROADWAY—Congratulations to *David T. Cooke*, Draftsman, on his marriage February 11 at White Memorial Presbyterian Church to the former Miss Martha Sue Mathis. *Charles S. Heilig* is on Military Leave with the Air National Guard in Texas. Best wishes to *Melvin Liles*, who resigned February 19 to accept a position with Burlington Mills in Franklinton. New faces in Roadway are *Neil Salmon* and *Allen Long*. Welcome! Congratulations to Mr. and Mrs. *James R. Moore* who announce the birth of a daughter, Karen Deleith, born Feb. 23 in Rex Hospital. The proud father is a Highway Engineer in Roadway Drafting.

PURCHASING—Get well wishes to *Betty Wilkins* and *Jack Munns* who are ill with a bad case of the flu. And congratulations to Mr. and Mrs. *Jack Munns* upon the recent birth of John Wesley Munns, II, in Mary Elizabeth Hospital.

RIGHT OF WAY—Reason for *Peggy Moore's* happy glow lately is her recent engagement to George Vollmar of Trenton, New Jersey, who is a student at State. Wedding bells will ring for the couple on June 4. Our very best wishes to Mr. and Mrs. Tommy Clifton who were married January 31 in the First Methodist Church at Mount Olive. Mrs. Clifton is the former Miss *Quita Deaton*. Quita is a steno in Right of Way and Tommy is a student at State. It's nice to have *Miss Sally Bunn*, who recently transferred from the Wilson Division Office, as a new addition to the secretarial staff. Employees were glad to have *John Holmes* back at work after a recent operation at Rex Hospital. Reports are "flu bug" hit about a dozen employees recently. Congratulations to Department Head, *W. H. Webb, Jr.*, who was elected National Director of the American Right of Way Association for the Carolinas at its meeting in Charlotte February 9-10.

LOCATION—*John Sanders*, Draftsman II, is a new temporary employee in the Department. *Louise High* was ill with flu for a week in February. Employees were sorry to lose *Anna Roberts*, Draftsman, who resigned recently to join her husband at the University of North Carolina in Chapel Hill. While her husband is getting his degree, Anna will be working as a Draftsman at the University.



Mrs. Sandy Curlee, who before her marriage February 28 in a candlelight ceremony at Ephesus Baptist Church, Cary, was Miss Ruth Franklin of Raleigh. The bride is the daughter of Mr. and Mrs. W. N. Franklin of Raleigh and the groom is the son of Mr. and Mrs. H. P. Curlee of Raleigh. Mrs. Curlee is employed with the Highway Commission's Equipment Depot and Mr. Curlee is associated with Curlee Machinery Company, Inc. of Cary. The couple plan to make their home on Trinity Road in Cary.

PERSONNEL—Recent flu victims in the Department were *Sam Badgett*, *Dot Medlin*, *Betsy Shelton* and *Fred Parker*.

BRIDGE MAINTENANCE—The best of luck to *Kay Satterwhite*, who resigned January 29 to keep house. Kay had been with the Department five years and was secretary to Department Head *C. B. Taylor*. Flu victims in Bridge Maintenance were *Margie Massengill* and *J. R. Markham*.

EQUIPMENT—Congratulations to *Lydia* and B. T. Kornegay upon the birth of a daughter, Donna Allyson, November 26. *Delores Stevenson*, temporary replacement while Lydia was on maternity leave, resigned Feb. 26 and Lydia returned to her secretarial position March 1.

COMPENSATION—Get well wishes to *Florine Boone*, who has been ill for a month with influenza.

FEDERAL CONTACT—Mr. and Mrs. *J. E. Henderson* visited for a week in Atlanta, Georgia during February with Mrs. Henderson's brother.

ADVANCE PLANNING—Welcome to *Charlie Sessoms*, a new Project Engineer, who transferred from Planning. *Carolyn Beck* vacationed in Baltimore for several days the last of February with her sister.

LEGAL—*Joan Reeves*, secretary with the Department since October, resigned

February 26 to join her husband in Laurens, S. C.

ACCOUNTING—The "flu bug" hit hard in this Department. Reports are 18 or more employees were out sick. Congratulations to Mr. and Mrs. Ed Leonard upon the birth of a baby girl, Mary Dianne, in Mary Elizabeth Hospital Feb. 20. Mrs. Leonard is the former *Mary Edwards*. Best wishes to *Mr. and Mrs. James Bullard* who were married February 7. Mrs. Bullard is the former Gail Patrick of Omaha, Nebraska. *Norman Paschall* attended the IBM 650 Programming School in Atlanta, Georgia recently. Recent Vacationers to Fort Lauderdale, Florida were Mrs. *Martha Caddell* and husband, and *T. P. Brendle*.

PUBLIC RELATIONS — Department Head *Sam Beard* was ill for a week and a half during February with "old-fashioned" flu; and Photographers *Pete Bourke* and *Harold Powell* were also victims. Congratulations and our very best wishes to Mr. and Mrs. Robert John Carlson of Attleboro, Massachusetts who are proud of a son, Robert John, Jr., born January 17. Mrs. Carlson is the former *Margaret Burk* of Raleigh, who prior to her marriage in April, 1958, was Editor of ROADWAYS for six and one-half years.

PLANNING — Fellow workers hope that *Doris Hall* will soon recover from injuries received in a serious automobile accident during January. *Jo-Ann Turner* of Raleigh has been working temporarily for Mr. Jay since Doris' accident. *L. Polk Denmark* reports that recently when the prisoner-janitor asked him when he was retiring and he replied, "July", the janitor beamed and said, "oh, I get out before you—I get out in June." *Doris Gay* and *Shelby Womble* are working on the new county maps in Planning's Mapping Section. Department Head, *J. S. Burch* was pleasantly surprised February 17 when employees presented him with a lovely birthday cake.



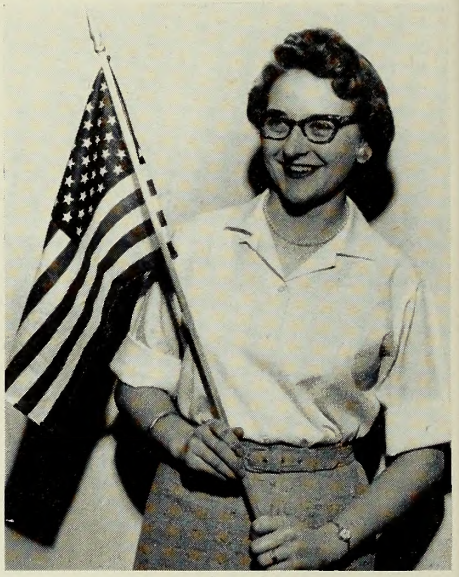
IN TIME TO VOTE—Congratulations to Gilfredo Gonzalez who just recently became a full-fledged American citizen.

Planning employees really surprised Gil when they all assembled and called him in for a celebration. He was honored with a delicious two-tiered cake gaily decorated with patriotic red, white and blue flags. Also, co-workers presented Gil with a fine set of cuff links to show their esteem.

SECONDARY ROADS — Department Head *John Swain* reported a delightful two-week vacation in Orlando and Miami, Florida. While in Miami, he saw celebrities Joe E. Lewis and Milton Berle and talked with Arthur Godfrey.

BRIDGE—*T. B. Gunter, Jr.* and *W. S. Winslow* attended a meeting of the Highway Research Board in Washington, D. C. in January. Employees will miss *A. J. Hughes* who is leaving the Permit Department to assume his new position as Assistant Division Engineer of the 14th Highway Division in Sylva. And the best of luck to *Judy Ring*, Mr. Hughes' secretary, who resigned to accept a secretarial position at State College. *R. A. Shaw*, Bridge Design Engineer in the Drafting Room, will replace Mr. Hughes. *Clifton Dean Moss, Jr.* is the new replacement for *Woodie Warrick* in the Permit Dept., who recently resigned to resume his studies at State College, The best of luck to *E. I. Bobbitt* who resigned to accept a position with Ewell Engineering Company in Lakeland, Florida. New faces in the Bridge Dept. include *Robert L. McGarr, Billy B. Isom, Jacob A. Williamson, Charles D. Adkin* and *James H. Medlin. Jimmy D. Lee* recently transferred to Right of Way and *Gerald D. Stone* joined Highway Planning. *George T. Parkin* and *Landis Temple* attended the Third National Prestressed Concrete Short Course recently held in Gainesville, Florida. Two proud new papas are *Robert L. McGarr* whose baby son was born Feb. 18, and *James H. Byrd*, whose little daughter, Lescia Kelly, was born Feb. 21. Reason *John Collier* has been going around wearing a "million-dollar" smile is the birth, January 30, of his first little girl. John and wife, Jane, are already parents of three fine boys. Get well quick to *Fred Collins*, who has been ill for three weeks with "double Pneumonia" and to Murray Howell who is recuperating from a recent operation at Rex Hospital.

PHOTOGRAMMETRY—Employees are proud of their nice, new quarters in the basement. Open-house was held Friday night, Jan. 29, and Photogrammetric workers invited families, friends and employees of the Location Department for a tour of offices and the exhibition of the latest Photogrammetric equipment. While guests enjoyed piped-in-music,the newest feature of the Department, coffee and cookies were served up in fine style. Recently after a visit by the local Press, employees in Photogrammetry were described as "Beatnicks in a Dimly Lit Cellar, surrounded by rock and roll music." Well, we are mighty proud of our newest Department and "Highway Beatnicks." The *Chester Gray's* spent the Christmas and New Year's holidays vacationing with his parents in sunny St. Petersburg, Florida. Mr. and Mrs. *Ed. Page* and son, Peter, visited her family in West Virginia over the holidays. Two new additions in the drafting section are *Art Denning* and *John Isley, Jr.* Art, formerly with John Edwards, Consulting Engineers, is married to the former Miss Pat Bowden of Coats and they are parents of a daughter, Vicki. John is a one-time Brooklynite but turned Southerner after marrying Miss Lillian Thrower of Greensboro. Prior to his employment with the Commission, he was a student at State. Welcome to *Leighton Elliott*, Photogrammetry's new pilot, who replaces *Donald Osborne*. Leighton and his wife, Martha, have one teen-age

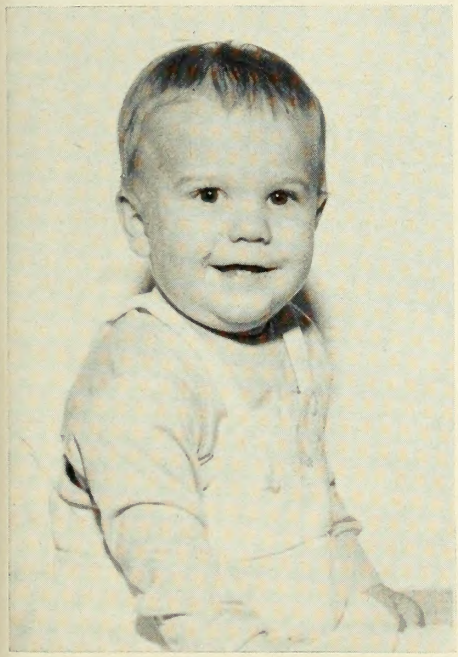


Mrs. Gwen Jones, draftsman in the Roadway Department and a native of London, England, just recently became a naturalized American citizen. Gwen's husband is studying for a degree in Industrial Arts at State College, and they are parents of a 16-months old daughter, Diane. She joined the Commission in May of 1957. Home is 1217 Kent Road. Fellow employees salute the new citizen and say congratulations.

daughter, Sherrie. Prior to joining the Photogrammetric staff, Leighton was a civilian employee with the N. C. Army National Guard. Our very best wishes to *Joanne Wilkerson*, draftsman in the department, who was married December 20 to Ray Stevens of Goldsboro, in the First Baptist Church in Hartsville, S. C.

SAFETY — President Eisenhower invited *Tarvia Jones*, Safety Engineer, to attend the President's Conference on Occupational Safety in Washington, D. C., March 1-3. The Washington meeting studied the national problem of how to minimize the country's losses in manpower, technical skill, human suffering and financial waste that job accidents are causing. Congratulations to *Ann Sterling* who received an "A" upon completion of her short course in Sociology at State.

REPRODUCTION — Flu took its toll in this Department, too. Members who were hit hard by the "bug" were *Paul Pearson, Raymond Jones Claude Sugg* and *Earl Williams*. Reproduction's newly remodeled quarters are admired by all. And the new work order system assures employees of fast and efficient service by Department Head *Paul Pearson* and his fine staff.



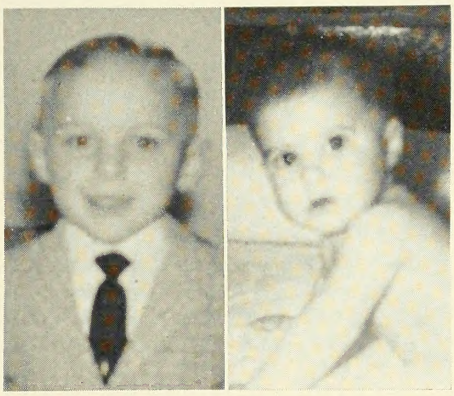
Introducing Master Steven Rajagh, age one year, whose sunny smile says "hello" to all Highway employees. Steven's proud parents are Louis and Mary Rajagh and "Mom" works in Safety.

DIVISION ONE

By M. ELWOOD COPELAND

Division Correspondent

WELCOME to our Division, *Gilbert Wiliams* of Ahoskie, who is employed as automotive parts clerk I at the Union Equipment shop; and *Thomas Dail* of Hertford, who is employed as automotive parts clerk I at the Hertford Equipment Shop.



Machine Operator and Mrs. J. E. Rhodes are the proud parents of these two attractive youngsters. Betty Jo is pictured at the right and Ricky Dale is on the left.

CONGRATULATIONS are in order for Mr. and Mrs. *Charles Phelps*, who are the proud parents of a daughter, Kathy Lynn, born January 18th.

ENJOYING the Florida sun is *Jim Twiford* of Point Harbor, who retired in November and is spending the winter in the Sunshine State where he, his wife and daughter have an apartment. *David S. Kelly* and *W. J. Starr* enjoyed Florida vacations recently. The Blue Grass State was the destination of *Dick Brewer*, who attended the Ruritan National Convention in Louisville.

A SPEEDY RECOVERY is wished for Ferry Supt. *John F. Wilson*, who suffered a heart attack and spent some time in Norfolk General Hospital; *W. A. Stevens* Knotts Island Machine Operator, who is out with a heart condition; and Maintenance Supervisor *R. C. Bunch* who suffered a fractured rib. The flu and various other illnesses hit these people recently: *Mrs. Jean Humphlett, E. L. Dovey, E. A. Walker, George K. Maek, John B. Seymour, D. H. Keel, L. T. Carter, G. D. Asbell, G. M. Black, Graig Harrell, George Carpenter, Joe Wagner, David A. Carter* and *Ralph White*. We are happy to report everyone is feeling much better now.

ITS MOVING TIME for the Road Oil Department, in the process of moving the asphalt plant from Roper to Hatteras Island. Road Oil Supervisor *R. C. Speight* and part of the asphalt plant employees have moved there assembling the plant and grading the property for the air strip. They also plan to resurface the highway from Oregon Inlet to Hatteras.

GOOD LUCK to *T. G. Howard*, who retired from his duties as automotive parts clerk I in December after 18 years of service with the State.

WE REGRET to report these deaths: J. A. Twiddy, Maintenance Foreman II of Coinjock, who suffered a heart attack. Twiddy was a veteran of 14 years service with the State. Retired Blacksmith Jasper H. Rhodes died in February after a short illness. He had worked with the Highway Department for 26 years. David H. Hancock of Greenville will be missed by his many friends in this Division. David was one of the victims of the big plane crash near Richmond, Va. Due to an error in the last issue of ROADWAYS, we reported the death of Road Oil Supervisor *R. C. Speight* and the item should have reported the death of Mr. Speight's mother, who died at the age of 92. We regret this error and at the same time offer our condolences to Mr. Speight in his loss.



Five generations of a Division I family are pictured here. Front row, left, is Mrs. Susie Thompson, 89, whose grandson works in the District Office at Elizabeth City. She has two sons working with the State, Arthur Thompson with Maintenance at Elizabeth City and Clyde Thompson, with the Prison Department at Woodville. Beside her is her daughter, Mrs. Lillian Smith of Point Harbor. Mrs. Smith's husband was bridge tender of Currituck Sound Bridge from the time of its completion until his death in 1955. Back row, left is Mrs. Enla Perry, whose husband, J. C. Perry, is bridge tender of Currituck Sound Bridge. At the right is Mrs. Perry's daughter, Mrs. Christine Williams. The newest member of the family, Malotha Williams, Jr., is pictured with his great grandmother, Mrs. Smith.

DIVISION TWO

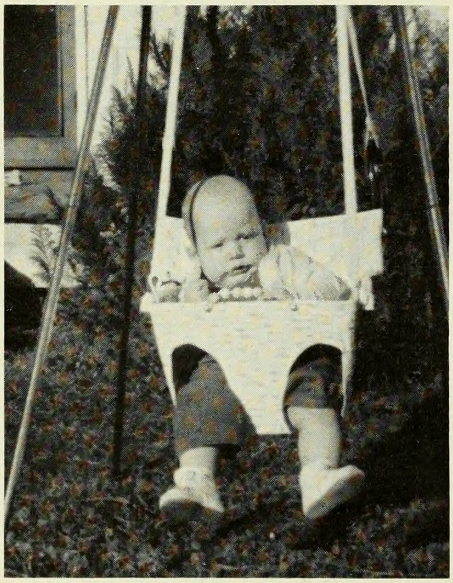
By ROY D. FRANKS

Division Correspondent

A FLORIDA VACATION was enjoyed recently by *J. F. Poole and family.* They report a very enjoyable time at Cypress Gardens and also at the Orange Bowl Parade.

ANOTHER CANDLE has been added for these people who celebrated birthdays recently: *V. R. Barnette, P. H. Broadway, L. B. Cox, E. D. Credle, W. L. Ebron, C. R. Gold, C. L. Gray, J. H. Guirkins, C. E. Hardee, J. L. McDonald, R. E. Smith, W. K. Smith, H. J. Stallings, I. E. Stowe, A. W. Sumrell, L. F. Waters, S. D. Whaley* and *A. J. Williams.*

BITTEN by the pesky flu bug were: *V. R. Barnette, S. V. Catlett, W. L. Ebron, C. L. Gray, J. H. Guirkins, F. L. Joyner, L. L. Linton, J. L. McDonald, L. W. Rowe, Sr., G. P. Sanders, R. E. Smith, H. W. Stokes, A. W. Sumrell, E. L. Tripp, W. P. Whitley and A. J. Williams,* all from the Equipment Department. Its good to have *Thelma A. Exum,* stenographer in the Division, back after being hospitalized from a bout with the flu. Those from Equipment who have been in the hospital are *J. L. Clements, O. S. Denby, Julius Joyner* and *L. F. Waters.*



Not a bit too happy about having his picture made is William Collins Barwick, six months old son of the Walter Barwicks of Cove City. Walter, who is employed as a Maintenance Foreman in the Landscape Dept. of Division 2, first came with the Highway Department in 1950, leaving later to serve a hitch for Uncle Sam and returning in 1957.



"Hey there! My name's Margie Lee and my daddy is C. W. Snell, Jr., Division Engineer in Division 2. I was born July 12 and mommy and daddy think I'm a real doll."

DEEPEST SYMPATHY is extended to the family of Bridge Foreman *J. C. Weeks,* who died suddenly at his home in Greenville the day after Christmas; and to the family of Charles W. Davis, retired Office Engineer, who died at his Beaufort home on Dec. 26th.

MOVING ABOUT due to transfers are these people: *G. L. Stocks,* Bridge Foreman, transferred from Tarboro to serve in the same capacity in Division 2; *G. A. Taylor, Jr.,* who returned to Greenville where his family lives; and the families of *Charles Yohn, Jr.,* and *C. J. Cox,* who moved to New Bern to join their husbands who were transferred.

DIVISION THREE

By IRENE L. WORLEY

Division Correspondent

IT'S ANOTHER BOY for the *Bobby Powells,* who now have three. The latest Stephen Kent, was born January 5.

A SPEEDY RECOVERY is wished for *Grady S. Simmons* of District 2, who is a patient at Sampson Memorial Hospital. *Art Mitchell* of District 1, *R. W. Blackburn* and *D. L. Carter* of District 2 are on leave of absence due to illness and we send get well wishes to each. We're glad *"Bill" Honeycutt* is able to be back after an illness. We've had lots of flu but we're thankful to say most of us got over it quickly and did not have to stay out from work very long. *Mr. Coley,* Equipment Superintendent, came by to see us the other day. He has been in the hospital and out of work for quite a while. He is still unable to be back at work, but appears to be well on the road to recovery.

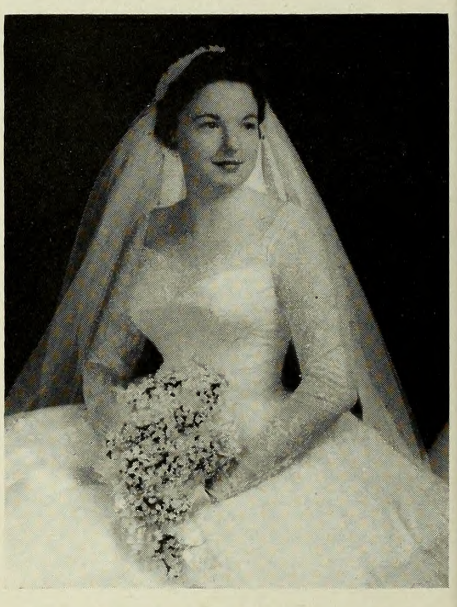
OUR LOSS and Durham's gain is brought about by *W. D. Moon's* transfer to that city. *Roy Brown* will be our new Division Right of Way agent in Wilmington.

IT WAS GOOD to see *A. H. Griffith,* who visited with us recently and proudly announced a new addition to the family. Dean Craig was born January 25. Papa is one of our former construction boys, now located in Morganton. Mr. and Mrs. *Evans McCullen* are the proud parents of a son, born December 19. The new pop is in the construction department at Clinton.

MUCH HAPPINESS is wished for *Henry T. Wooten,* who retired January 31st after 38 years of faithful service. We will really miss seeing him around, but wish for him much happiness in his retirement.

WEDDING BELLS rang out in March for Jean Norton Casey and *Thomas Devone King,* who is an engineering Aide II in Clinton.

CONGRATULATIONS to the *John Naylors,* who are the proud parents of a daughter, Rebekah Mae, born February 20. He works in Construction.



Mrs. Gary Lamar Cline is the former Margaret Marie Ashworth, daughter of District Engineer and Mrs. R. A. Ashworth, Jr., of Wrightsville Sound. Her marriage to Mr. Cline, son of the Rev. and Mrs. Reeves C. Cline of Wilmington took place Dec. 19 in the Little Chapel on the Boardwalk, Wrightsville Beach. They are making their home in Durham where she is employed at the Duke Medical Center. He is a student at the University of North Carolina.

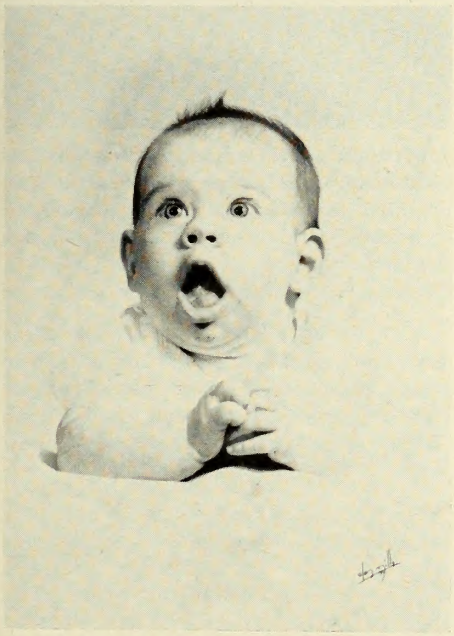
DIVISION FOUR

By AUDREY L. PERRY

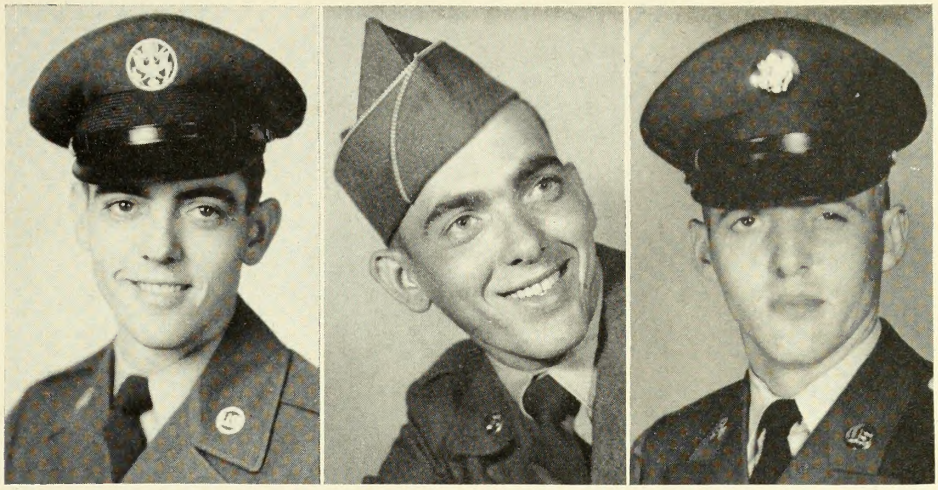
Division Correspondent

THE STORK delivered these bundles of joy recently: a daughter at the home of the *Marion Moores;* Robert Glenn, fourth child of the *S. L. Harlows;* and Gregory Lee, grandson of mechanic *Carl Lee, Sr.*

ABSENT from work due to illness, mainly the flu, include *Bruce Ferrell, Howard Felton, W. W. Williams, George Taylor, Daniel Vick, Isiah Mercer, Ben Bass, C. L. Carpenter, Mable Askew, Frank Conner, W. M. Mashburn, G. W. DeBerry, Ralph Willis* and *J. P. Brewer. Robert Woodard* was absent due to a foot injury; *W. L. Bunn* recently underwent surgery at Veterans Hospital in Durham and we wish him a speedy recovery. *Paul Fulghum* is reported much improved, but at this writing, still hospitalized; and *S. R. Livesay, D. B. McMichael* and *Sed Holmes* had recent bouts with the flu. Get well wishes are extended also to these people: Mrs. Odessie Wood, wife of *Lonnie L. Wood; J. E. James, J. R. Payton, L. V. Hart, Clyde W. Little,* Mrs. Irene Harlow, wife of *A. C. Harlow;* to *Milton Bradley's* wife Dorothy and daughter Pamela Jean and *C. H. Hamilton.*



"Did someone say look?" This is the young daughter of Mrs. Audrey L. Perry, Steno Clerk in the Fourth Division office. Virginia Lynne Perry was 3 months old when this picture was taken.



Presenting the three sons of Machine Operator Eugene D. "Pete" Harlow of Roanoke Rapids. Left is Grady, formerly with the Air Force stationed in Greenland and now a foreman with Rural Plumbing and Heating, Raleigh; center, Eugene, formerly with the Military Police in Germany and now employed by Rural Plumbing and Heating in Roanoke Rapids; and Robert, right, who recently completed basic training at Fort Jackson, S. C. and has been sent to Camp Gordon, Ga., for further training. Prior to entering the service, he was assistant manager for the A&P Tea Company, Richmond, Va.

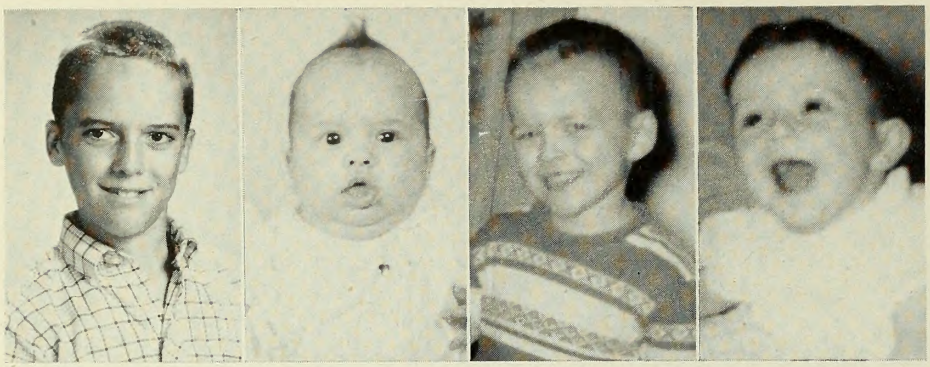
THE HIGHWAY CONFERENCE in Raleigh was attended by *E. P. Koonce, T. D. Grantham, S. R. Livesay* and *D. T. Overman.* Several weeks later, *George G. Eason, Charles L. Parker, C. B. Wood, Bobby Bissette, Wade Brooks, L. H. Cameron, Roland L. Veillette, Russell Parker, James Long, James Hodge, Stephen D. Barnes, Fred Boone, J. G. Barnhill, Ronald Richards, Howard Davis, Howard Peacock* and *Joseph Herring* went to the Capital City for the Bituminous Concrete Plant Mix School.

COMING AND GOING—*M. P. Yount* reports a most enjoyable trip to the Shrine Convention at New Bern; *Leland R. Davis* attended the races in Florida; *Mrs. Betty G. Simon* had a nice weekend trip and visit with her sister in Washington; *J. G. Matthews* enjoyed a visit from his daughter and family of Norfolk, Va., and Mr. and Mrs. *Ralph Willis,* whose son George is home on leave from McGuire Air Force Base in New Jersey. Sorry to hear that *A. J. Satterwhite* retired on disability, but we wish him a long, happy and healthy retirement. Location Engineer *T. R. Mitchell* and his party have been transferred from Weldon to North Wilkesboro and *H. R. Geddie, Larry Bailey, Bill Dillon* and *Harold Richardson* were moved to Wilmington.

SYMPATHY is extended to *J. J. Matthews* and family in the recent death of his mother-in-law; the family of *Earl Crump;* to *Harry Lee Price* and family in the death of his father; and to the family of retired employee *Benjamin F. Adams.* Buddy died recently at the Veterans Hospital in Durham.

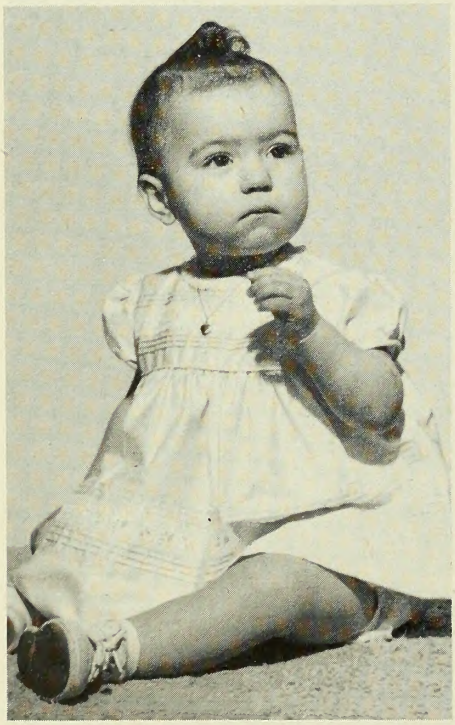


Miss Carolyn Yount, who was an honor gradnate of Rocky Mount High School is continning her scholastic standing at Lenoir-Rhyne College in Hickory, where she is studing Business Administration and made the Dean's List for the first semester. Her father is Area Foreman with Nash County Maintenance.



These are the children of two employees in Division 4. At left is 13-year-old Arthur E. Ferguson, Jr., an A student in the seventh grade. He is active in the work of the Royal Ambassadors at New Hope Baptist Church. Next is his sister, 3-month-old Donna Frances. They are the children of Arthur Ferguson, who is assisting S. R. Livesay as Office Engineer. Second from right is Robert Sidney Boyette, Jr., four years old, and his sister, Patricia Diane Boyette, who is six months old. They are the children of Maintenance Foreman and Mrs. Boyette of Division 4 Landscape.

EVERYONE is proud of the new rest area on I-95 just east of Selma, especially *G. T. Wilkins*, who supervised the work. The area is 13 acres in size and will cost about $24,970. It is equipped with 4 rest rooms, 10 tables 2 water fountains and 2 furnaces on each side. There are parking facilities for 20 cars and 4 trucks and a car line on each side. Mr. and Mrs. Arthur Dickinson and family of Lake George, N. Y., were the first people to use the rea and were very much impressed.



Dark-haired, dark-eyed Devonya Ann, age 14 months, is the daughter of Mr. and Mrs. Charles Turnage of Goldsboro. Charles works in Wayne County.

A REFRESHER COURSE for Red Cross instructors and mobile unit operators in the Division was held recently at the Nash County maintenance yard with the following in attendance: *Steven Amerson, Morris Barwick, Simon K. Bass, Stephen E. Boykin, James E. Cooper, Robert W. Dawson, Kenneth Gay, Kenneth Ray Hill, Sidney F. Holmes, George H. King, Luther L. Manning, James C. Massengill, Paul E. Mitchell, Donald T. Overman, Edward H. Paschall, James C. Peele, M. A. Robertson, Albert E. Spain, Donald E. Woodard, Durward Young* and *M. P. Yount.*

DIVISION FIVE

By PEGGY BRIGHT

Division Correspondent

A FAREWELL luncheon was given for *Frances King*, stenographer in the District 1 office, by folks in the Division office. Frances is moving to California and everyone wishes her luck and happiness there. We'll adso miss the smiling face of *James A. McQueen*, who has transferred to the Bituminous Department in Raleigh. *R. J. Murphy* has replaced him as Road Oil Supervisor. Folks in the Division office gave *Charles B. Bass*, Right of Way Agent, a send-off on Feb. 12. Charles will be associated with a private concern.

CONGRATULATIONS to the *Wade Tilleys* who are the parents of twins, a boy and a girl, born on February 13. Wade and Helen also have another child.

WE HOPE everyone is fully recovered from the flu. A few of those who were bitten include *Cloyce Alford, M. T. Adkins, Curtis Williams, F. R. Hunter, J. S. Ray, J. L. Ashby, T. C. O'Brien, Leroy Cates, C. F. Gentry, R. H. Oliver* and *Kyle Jones.* Others who have been on the sick list include *Jessie Carlyle, R. H. Denton, L. L. Pippin, S. W. Sykes, C. W. Catlett, E. B. Frazier, S. T. Holmes, W. T. Denton, H. M. Ferguson, J. A. Barber, Eugene Neville, J. A. Franklin, D. F. Williams* and *Nathaniel Perry.*

CONDOLENCES to *Ralph G. Williams* in the recent death of his father; to *Alton Ellington* in the death of his brother; the families of *Pettigrew Pearce* and *A. L. Poole.*

GRANVILLE COUNTY Maintenance and Road Oil employees drew names and exchanged gifts at the annual Christmas party. Many useful gifts were received but *Leo Weary* was disappointed because he did not get a Nanny goat. The employees gave him a Billy two years ago and he had wished for a Nanny this year! The Division office held its annual party on Dec. 22, and Person County Maintenance Employees enjoyed delicious chicken stew on their last day at work. Gifts were presented to *Kyle Jones, B. F. Vaughan* and *E. L. Humphries.*



William and Garland Ellington display their kill after a successful day of bird hunting. Both are machine operators with Granville County maintenance.

NEW HOMES are being enjoyed these days by *C. L. Edwards* and his wife, who recently moved to their new home in Durham from Warrenton; and *Bruce Hockaday*, who recently purchased a new home.

FLORIDA TRIPS seem to be quite the fad these days when we're all digging our way out of the snow. *Dudley Wall* and family report a delightful vacation at Daytona Beach. Others who have enjoyed recent vacations include *M. E. Hillard, J. E. Stanley, L. S. Guy* and *L. L. Barbour, J. B. Alford* and *L. R. Perry* have been out on leave for a few days shooting at birds. . Think they killed a few. *J. H. Alford* spent a few days over the holi-

days with his daughter. Betty Sue and Frances, in Albemarle.

LATE FLASH!!! *Joe Greenway* was planning to have his picture in the magazine this time with his kill of birds, but some of the people discouraged him my telling him that one partridge is hard to photograph and sparrows are much too small. Oh, well, maybe he can have his picture snapped up at Kerr Lake in that new boat he recently purchased.

DIVISION SEVEN

By P. L. WELCH

Division Correspondent

THE DIVISION OFFICE has had a face lifting, painting, repairing, etc., and you might not recognize it.

NEW ARRIVALS include Mark Walker, son of the *Broadie Rileys* (Construction Department); Mr. and Mrs. *Jack Martin* (also Construction Department) have a new daughter and there's a new member in the *Theodore J. Garrard* home.

A SPEEDY RECOVERY is wished for Mrs. *Charles E. Murphy*, a patient at Alamance General Hospital, Burlington. Her husband is a foreman at Ivy Bluff Quarry. Truck Driver *Arthur R. Piner* has been seriously ill, and a patient at Memorial Hospital in Chapel Hill, but we are happy to report he feels well enough to return to work. Several of our employees have had influenza, but fortunately most of them have recovered and are now back on the job.

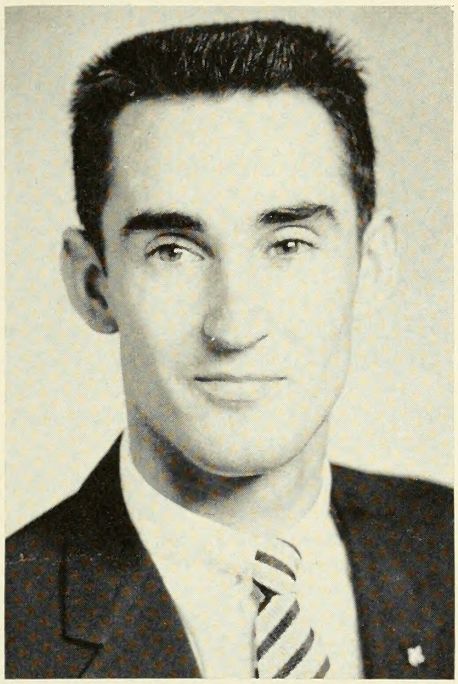
OUR CONGRATULATIONS to *Billy Forgay* and *John Lee McPherson*, of the Construction Department, who recently moved into new homes. *Jerry Bullard* of Construction did extensive remodeling to his home by brick veneering it, adding a carport and another room.

CATFISH STEW was on the menu when Construction employees gathered at *Ott McPherson's* cabin for an evening of fun.

CONDOLENCES to the family of *H. F. Lucas* in his recent death.

WELCOME to # 7: *George F. Ware* of Right-of-Way, who comes from the Asheville office to replace *Bobby Cagle* who resigned to work for Cabarrus Bank and Trust Co., Concord; *Ned Chapman*, who joined Right-of-Way under the training program; *J. J. Cole*, Resident Engineer and his party, *Hugh Y. Turlington*, *Royden Caulk, Jr.*, *R. W. Hassell*, *Morriss E. Barwick*, *Eddie Hester*, *Howard A. Peacock*, *Howard B. Davis* and *J. C. Herring*.

AN ENJOYABLE trip is the report *Jack Martin* brought back with him from Florida, where he saw the Cypress Gardens water ski show and the Miami boat show. *R. R. Greason* and *Jesse Hall* attended the Asphalt Conference in Raleigh.



Dalton Rackley, junior at State College, has been installed as president of Iota Lambda Chapter of Alpha Phi Omega, national service fraternity. He is the son of Mr. and Mrs. Francis Rackley who live in Nashville where he is employed with the Equipment Department. Dalton is married to the former Allene Holladia of Rocky Mount.

DIVISION EIGHT

By VIRIGINA S. WILLIAMSON

Division Correspondent

WEDDING BELLS rang out for *Gene Morton*, fromer secretary to Division Engineer *T. C. Johnston*, and Fred Nutter of Cleveland, Ohio. The wedding took place at Roseland Methodist Church, Aberdeen, and they are making their home in Cleveland. *Anne Poindexter* and Edward Tawes, Jr., will meet at the altar in April. Anne, who worked in the Division office last summer, is the daughter of our late Division Engineer T. G. Poindexter.

WELCOME to *Mrs. Janice Hemmens*, new Right-of-Way secretary, who, by the way, is a niece of *Layton Gunter*. Welcome, also, to *Mrs. Caroline Crow*, secretary to *Herman Shaw* in the Appraisal Section. It is good for us that Caroline's husband was stationed at Fort Bragg. Another addition to the Division is our new Right-of-Way Agent, *J. L. Bowman*, who came here from Greensboro. He and his wife Jean and their two lovely daughters, Pat and Deborah are making their home in Southern Pines.

NEW ARRIVALS include Danny Ray, son of the *Robert C. Kecks*, and Andrew Byron, son of the *Billy Dunlaps*.

CONGRATULATIONS to *Douglas Edge*, who has been promoted to the position of Materials Inspector, replacing *Mickie Northcutt*, who went to the lab.

WE REGRET to report the death of *Curtis King* of Richmond County, victim of an automobile accident in January; and *Allie B. Lyon* and *J. L. Scott*, retired employees.

THE SICK LIST has been crowded with names, what with the flu and everything else going around. *H. H. Jordan*, Assistant Division Engineer, has been carrying his arm around cautiously after having some cysts removed; *S. P. Swaringen* has had the flu and a cold; *D. M. Kunce* and *Tom Everhardt* of Landscape have been sick. At this time, Mr. Everheardt is in the hospital following an operation and we understand Mr. Kunce has been in Veterans Hospital but has returned to his home to build himself up for an operation. *Archie McKenzie* and *Dexter Hough*, recently recovered from illness, are back at work, and *Prentice Lee Patterson* has returned to his home following surgery.

GOOD LUCK to *T. S. Craven*, who resigned to enter the real estate business. *George Hilliard* and *James A. Hicks* retired recently after more than 30 years of service and we wish them health and happiness.

TWO COUPLES from our Division have been basking in the Florida sun. They are: the *S. P. Swaringens* and the *E. C. Dardens*.

CONGRATULATIONS to *Z. V. Tolar*, Road Oil Department, who is our new chairman of the Employees Association.

THIS 'N THAT—We hear *Joe Blue* is sporting a new Falcon. Had planned to give a report on *Gentry Morgan's* recent trip to Raleigh, but no details yet. Recent visitors include former employees *Betty Lou McFarland*, student at Guilford College, and *Roy Williams* of Lees-McRae.

A teenager can be said to be grown up when he considers it as important to pass an examination as to pass the car ahead.

DIVISION NINE

By R. B. FITZGERALD

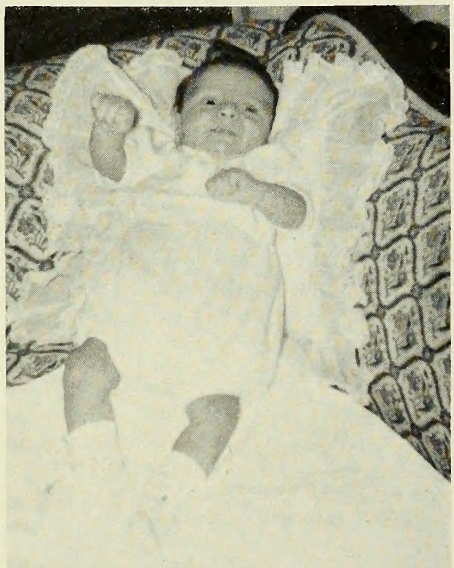
Division Correspondent

THE SMILES belong to *P. S. "Pink" Troxler, O. K. "Steve" Stephens and E. E. "Pete" Murphy*, who recently became new grandfathers. There are new arrivals at the home of Mr. and Mrs. *H. V. Booe* and Mrs. *E. E. Shelton* also.

VACATIONERS from this division include *O. K.* and *Betty Stephens*, who spent some time in Tucson, Arizona and Los Angeles, California. *D. R. "Mack" McMichael* and family visited relatives in Laurel, Miss. The *W. R. Carpenters*, including dog Frisky, spent a few days at St. Petersburg, Florida. *Edith* is secretary in the Right of way office. The *Cliff Walters* family visited relatives in Orlando, Florida and judging from Cliff's conversations, he must have stayed pretty busy checking all the beaches, pretty girls, etc. *Jane Smith* visited a brother in Baltimore, Md.

CONGRATULATIONS to newly-weds Hester and *Travis Tuttle*, who were married on December 23.

THE FLU BUG downed a number of employees and families but we are glad to report that everyone is feeling much better. Get well wishes are extended to *H. D. Danner, Paul C. Hicks, F. B. Mashburn, J. F. Mendenhall, J. M. Pegram* and *W. L. Reavis.*



Steven Lee Shaw, grandson of Landscape Supervisor G. T. Wilkins was only one month old when he visited his grandpa and had his picture made.

TAKING IT EASY at home these days are *E. C. Jarvis*, former maintenance yard assistant and *W. S. Tucker*, former maintenance foreman in District 2, who retired recently.

WE REGRET to report these deaths: *William Walter Goode*, maintenance yard assistant died after an illness of several months. He had been with the Commission for 10 years. Mrs. Emma Christian Smith, 87, mother of *John Thomas Smith*, died recently.

A REFRESHER COURSE for Red Cross Instructors was held recently in Winston-Salem with Garland Murray as instructor. Attending the course were the following: *H. D. Jones*, Safety Engineer; E. J. Lewis, *Jr., L. A. Cooke, G. M. Barneycastle, I. W. Morris, M. J. Owen, B. D. Martin, W. P. Greenway, W. T. Kincaid, J. W. Stone, J. H. Mays, Kelley C. Eller, Charles A. Klutz, Jr., Bruce J. Everhart, R. Q. Bare, Jr.*, and *E. L. Vaughn.*

OUR CONGRATULATIONS to *William E. Bacon*, Area Appraiser, who was awarded the SRA designation by action of the Board of Governors of the International Society of Residential Appraisers at its recent meeting in Chicago. This designation automatically admits Bacon to the senior membership of the Society. Less than 2500 appraisers have qualified for this honor. There are 16 members in North Carolina but Bacon is the first Highway Department employee to receive the honor.

DIVISION TEN

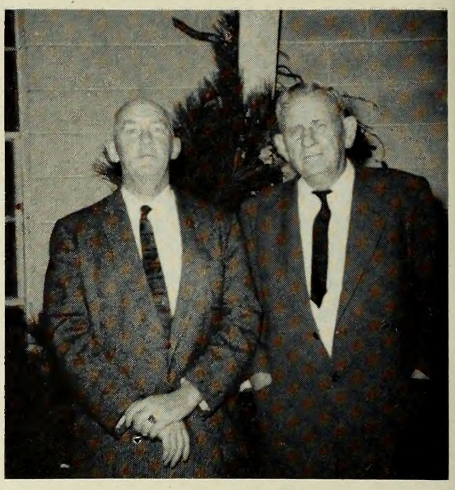
By J. W. JONES

Division Correspondent

OLD TIMERS gathered in the Motor Department Shop at Albermarle to honor *T. F. Royall*, who retired after more than 40 years with the Highway Department. Among the guests who paid tribute to Mr. Royall were Commissioner *J. Lee White* of Concord and *Otis M. Banks* of the Employees Association. On behalf of Anson, Cabarrus and Stanly County employees, *C. R. Smith* presented Mr. Royall with a two suiter traveling bag and engraved gold watch.

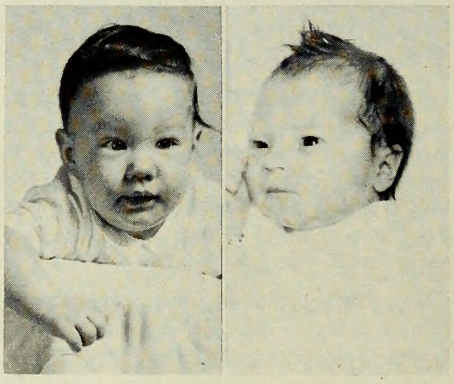
BEST WISHES to the *Kenneth M. Irvins*, who were married January 25 in the manse of Hopewell Church on Beattys Ford Road. They are making their hame at Long Creek. He is with the Maintenance Department in District 2. The bride is the former Carol Faye Jetton.

QUAIL SUPPERS were enjoyed by many of our people as a result of the marksmanship of *Floyd F. Morgan* and *Paul J. Thomas. W. F. Martin* of the Prison Department had a most successful season rabbit hunting with his beagles.



Retiring District Engineer T. F. Royall, right, is shown with his successor, C. R. Smith, former correspondent for ROADWAYS.

GET WELL WISHES are extended to *C. H. Faggart, J. H. Cranford*, Mrs. *Spencer C. Mauldin*, and *Lee Williams.* Several of our employees have been out recently with the flu. They are: *James H. Flake, Spencer D. Burris, William F. Hornback, James K. Jordan, Graham Johnston, Wade Marsh, Nathan M. Morgan* and *Joe E. Tucker.*



There are two mighty proud grandpas in the Tenth Division and the reasons for their smiles are pictured here. At the left is Robert Van Avery McNeill of Savannah, Ga., six-month-old grandson of Road Foreman and Mrs. William A. Irvin of Huntersville. Lithe Tracie Leigh Cook, aged three days, was just getting a good look at this world when she posed for this picture. Her parents are the W. C. Crooks, and the proud grandpa in this case is W. T. Smith.

WONDER what's the reason for adding some rooms to *Julius Morton's* house? What's up? An addition to the family??? Speaking of additions, the *Thomas V. Burch's* have a new son.

FIRE completely destroyed the home of *Josiah Perry, Jr.*, of Polkton. We offer him our sympathies.

WELCOME back to work, *William L. Brown* of District 2, who recently returned to work after an extended illness.



Motor Grader operator D. D. Shoaf of Cabarrus County poses prondly with D. D. Jr., 10 months old.

DIVISION ELEVEN

By CORA LEE GREER

Division Correspondent

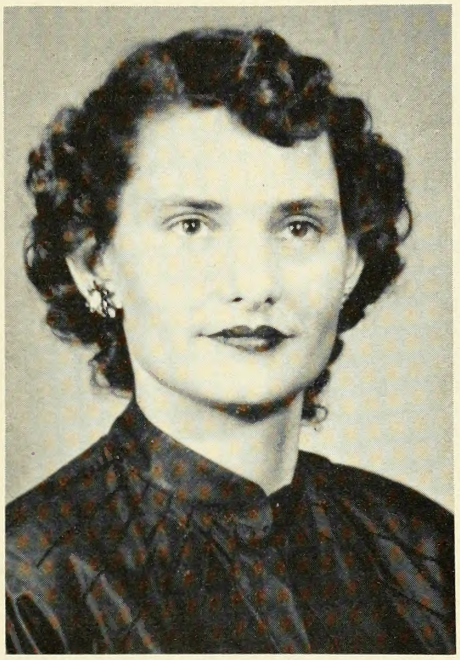
ITS GOOD to have *Tom Winkler* back at work after five months absence due to injuries received in an auto accident last August. Welcome back, *W. S. Walsh*, who suffered a broken ankle and still uses a cane for support.

A NUMBER of employees have been out battling the flu but have returned to work now. *E. F. Baird* of Valle Crucis, injured in November while removing snow from highways, is still unable to return to work.

HERE AND THERE—the *J. H. Councills* spent a recent week-end in Raleigh visiting Martha and Bob Leak and little Bobby. *Jack Gwyn* and family are enjoying the Florida sunshine while the folks back home battle snow, sleet, rain, etc. Hope their daughter is feeling much better now. *R. F. Isaacs* and family visited son Joe in Sunnyville, California over the holidays. Florida was the destination of Maintenance Foreman *Paul Higgins* of Alleghany County and *Oscar Gambill* and family visited the W. H. Hoppers at Port Charlotte and the Fred Benjamin family at Fort Meyers. We hear they had a real good time on Fred's 34-foot boat, but their fishing luck wasn't very good.



Rebecca Irene Walker, daughter of Mr. and Mrs. John E. Walker of North Wilkesboro, became the bride of Chester Phillips Jolly on January 17.



Mrs. Carl Gentry, Jr., of Yadkinville, daughter of Maintenance Foreman and Mrs. D. S. Ingram of Jonesville, has been named to Who's Who in American Women. She is a registered nurse, currently employed as operating room supervisor at Lula Conrad Hoots Memorial Hospital in Yadkinville. Mrs. Gentry has served as president of the Women's Auxiliary at the hospital, is a member of the Woman's Club and is organist at Center Methodist Church. She and her husband have an 8-year old daughter.

SYMPATHY is extended to *M. C. Royall* and *G. C. Phillips* in the death of their mothers; *Harrison Jennings*, whose wife died recently; and to the family of *W. H. Hayes*. Mr. Hayes, who died at the age of 87, retired as a section foreman in 1946 after 24 years of service.

WELCOME *Mary Carolyn Kirby* of Sugar Grove, a new employee in the District Office at Boone.

OUR NEW GRANDPARENTS are the *James Atwells*, whose granddaughter Anne Elizabeth Atwell, arrived December 7.

DIVISION TWELVE

By JEAN CLINE

Division Correspondent

THE NEW FACE in Right of Way is *Richard Torbik*, trainee assigned to this Division. Its good to have *A. D. Callahan* with us on a permanent basis, as well as *Johnnie L. Huffman*, *W. M. Rudisill* and *Willard W. Sherrill*. On the temporary roll now are *Hugh Gene Pennell* and *Roy A. Fulbright*. Welcome back to work, *W. A. McNeill*, *Clifford Kelley* and *Andy Meade, Jr.*, who have been out for some time due to illness.

A SPEEDY RECOVERY is the wish we send to *Fred Harrill*, who has been out for some time. Others on the sick list, but much better by now, include: *A. L. Levan*, *C. A. Poovey*, *O. R. Rockett*, *R. L. Harris*, *Floyd Warren*, *A. J. Mitchell*, *Mrs. W. R. Tilley*, Donna Ray, daughter of *B. R. Mills*, *H. H. Austin's* son Alvin; Charlie, son of *C. E. Somers*, *Mrs. C. L. Allen*, *H. T. Teague's* son Clarence; Mrs. *J. B. Robinette; J. R. Robinson's* daughter Patsy Jane and Mrs. *J. W. Earp*.

A MOST WELCOME visitor the other day was *E. R. McGimpsey*, retired Office Engineer, who reports a wonderful time in St. Petersburg, Fla.

SYMPATHY is extended to District Engineer *P. D. Miller* and family in the recent death of Mrs. Miller; to *C. S.* and *W. R. Tilley* in the loss of their father; to *T. H. Granfill* whose father died recently and to *C. E. Somers* in the death

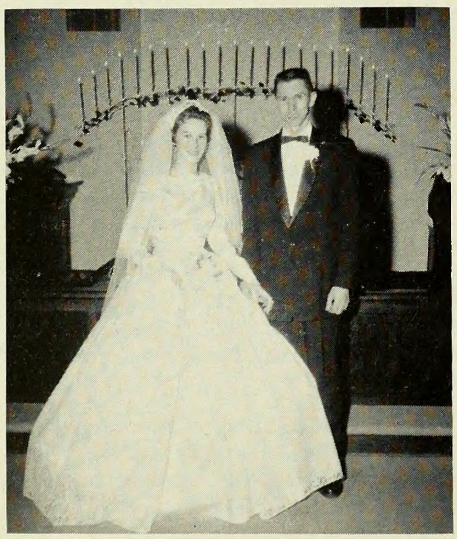
of his father-in-law. The second district was saddened by the death of *C. F. Helms*, 40-year-old Catawba County machine operator, who died of a heart attack. He had worked on maintenance for more than 10 years.

ITS A BOY for Mr. and Mrs. *Max D. Jones*. Pop is employed in District Maintenance in Cleveland County.

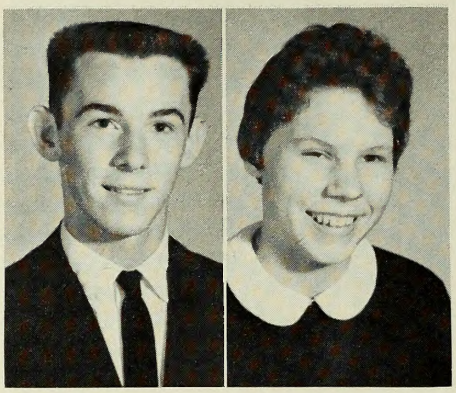
DELEGATES to the Highway Conference included *E. L. Kemper, W. W. Wyke, T. G. Brooks, J. I. Church, P. D. Miller, K. E. Mauney, R. R. Nichols, D. L. Rink, J. F. Abernathy, H. E. Eades* and *R. J. Albert*. A number of men attended the Red Cross refresher course also.

SEEN AND HEARD . . . Maint. Sup. *R. J. Corpening* dwelling on his 1960 desk calendar bearing the inscription "A little something extra for Pappy." Area foreman *J. B. Murdock* measuring high water and then later checking on the record snow depth; *John Bradburn* and *Wayne Connolly* comparing fish tales after their trip to Florida; *H. H. Austin* trying to sit pretty in his new little foreign car-looks much taller than he did in his Olds; and last, but not least, Safety Engineer Tarvia Jones reciting the constant danger lurking in "soft shoulders."

WELCOME BACK, *Bill Gardner*, who finished his work for Uncle Sam and came back to work with the Construction Department.



Mr. and Mrs. Johnny Ray Reavis were married recently in Statesville. He is the son of Maintenance Forman and Mrs. Vance B. Reavis and the the bride is the former Johnsie Marie Moose of Statesville.



District Engineer and Mrs. J. I. Church of Shelby are mighty proud of their two youngsters. John, left, is one of the three finalists for the Morehead Scholarship in District V and has an outstanding scholastic record for all four years of high school. He plans to enter the University of North Carolina this fall to study pharmaceutical research. Vickie is one of the most popular and leading students in her class at Shelby High.

DIVISION THIRTEEN

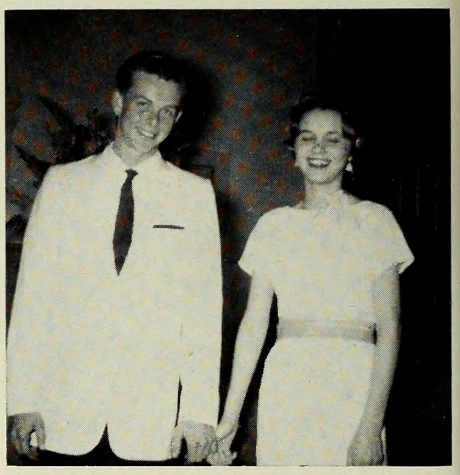
By DAN TURNER

Division Correspondent

ACCIDENTS put several of our employees in the hospital. *J. T. Knight*, Assistant Division Engineer, was struck by an automobile recently and hospitalized with a broken leg. District Engineer *B. S. Connelly* and Maintenance Supervisor *H. D. Aiken* were injured in an automobile accident. Connelly, who suffered a broken arm, was hospitalized but is now recovering at his home. Aiken was unhurt. *Dan Gilliam*, who was hospitalized for several days, has recovered from his illness and returned to work. *O. L. Wilson* reports that his daughter is improving after an illness and *Tim Dobson* and *W. H. Barrett* spent a week at home battling the flu. Division Engineer *W. M. Corkill* has had the flu but is back at work now.

SUNNY WEATHER was enjoyed by *Tom Gowan*, who attended the Daytona races and got sunburned while the rest of us were busy shoveling snow. Mr. and Mrs. *Wayne Morris* recently returned from Los Angeles where they had an extended visit with her family. *John Swann*, engineering aide in Construction at Brunsville, has been transferred to the Location Department.

CONGRATULATIONS are in order for Mr. and Mrs. *W. E. Jenkins* of Brunsville, whose daughter was born January 4th.



Mr. and Mrs. David Paul Brewer were married February 13 at the Concord Methodist Church iin Greer, S. C. The bride is the former Patricia Ann Kale of Asheville and he is the son of Mrs. P. W. Brewer and the late Mr. Brewer, also of Asheville. The groom is employed in the Location Department of Division 13.

DIVISION FOURTEEN

By D. V. RAXTER

Division Correspondent

FIRST AID TRAINING paid off recently in Graham County when *Wayne H. McClung*, Maintenance Foreman in District 2, came upon an automobile accident in which a youth pinned beneath a car was presumed to be dead. Realizing that the youth was alive but suffering from shock and asphyxiation, Mr. McClung began removing broken teeth and skin tissue from the patient's mouth, restored his breathing by artificial respiration and directed proper first aid procedures until help arrived.

THE WELCOME MAT is rolled out for Assistant Division Engineer *Arthur (Red) Hughes*, and Mrs. Hughes. He has been assigned to the Sylva Division Office. At the same time, we feel the loss of a loyal friend and working companion, *Paul Du-Pre*, Assistant Division Engineer, who is being assigned to Raleigh as Area Maintenance Engineer.

CONGRATULATIONS to Mary Katheryne Harper, daughter of Machine Operator and Mrs. *Horace G. Harper* of Cherokee County, who was married January 9



David Zero Mull, who retired recently after 17 years with the Maintenance Department, receives his final check from Foreman W. C. Reep.

to Sammy Wyatt of Marble. Mr. and Mrs. Wyatt are making their home in Marble where he is working with Columbia Marble Company.

IT'S A BOY for the *J. C. Auberrys*, Mr. and Mrs. *Max Reece* and Mr. and Mrs. *Clyde Cabe*.



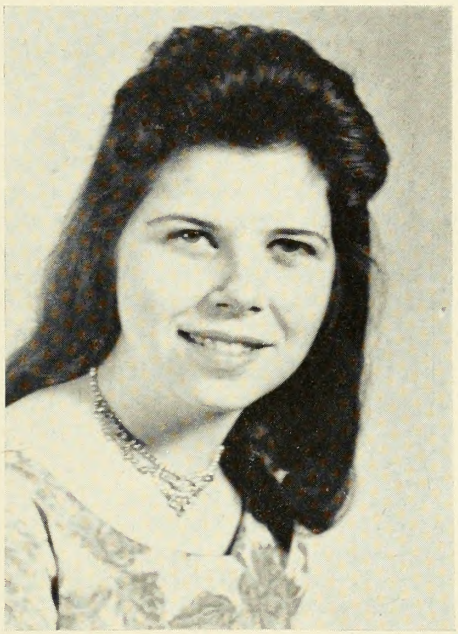
Miss Christine Bryson, stenographer in the Fourteenth Division office, is engaged to William O. Sutton, son of Mr. and Mrs. Leon Sutton of Sylva. Christine, who is the daughter of the Fred L. Brysons of Sylva, is a graduate of Western Carolina College. Her fiancee attended the University of North Carolina and Western Carolina College and is employed by Champion Paper and Fibre Company in Canton.

GET WELL wishes are extended to *Thomas J. King, D. G. Raxter, Ralph J. Stirewalt, L. B. Womack, Lee Pullium, James O. Turner* and *James S. Mason. Grady Phillips*, Graham County employee, is back at work after recovering from a fall which resulted in serious injury on Sept. 23. Also, *D. E. Hyatt, W. J. Freeman, Carl O. Ray, V. R. Rhinehart, Grover L. Davis* and *Harley Parker* have recovered after extended illnesses.

WE REGRET to report the death of *L. E. Stewart*, who died on January 8; and Leroy, son of Mr. and Mrs. *Renzo Jones*, who suffered fatal injuries when he was struck by a car.

GLAD TO HEAR that Mrs. *Bud Nelson* and daughters have recovered from injuries received in an automobile accident on December 31.

WE WILL MISS *Mrs. Edith O. Sutton*, who resigned recently. She was employed as receptionist in the Division office in July 1953, when the 14th was organized and moved to Sylva.



Mrs. Thomas O. Carpenter, prior to her marriage on Dec. 21, was Patricia Porter, daughter of Mr. and Mrs. James W. Porter of Robbinsville. Mr. Porter is employed in the District 2 Maintenance Department of Division 14.

1960 MAPS

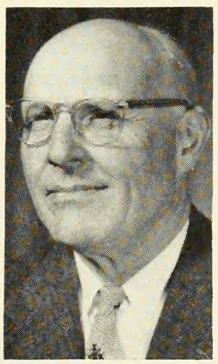
Copies of the 1960 color maps will be available around the middle of April. This year's map features a mountain scene on the front cover and a coastal shot on the back cover. Various points of interest are shown on the pictorial side of the map.

Transfers:

Hughes To 14th, Dupre To Raleigh

Arthur J. Hughes of Raleigh recently was named Assistant Division Engineer for the Fourteenth Division.

Hughes, who was serving as head of the permit and bridge data section, replaces Paul J. DuPre, named to the post of Area Maintenance Engineer with headquarters in Raleigh.

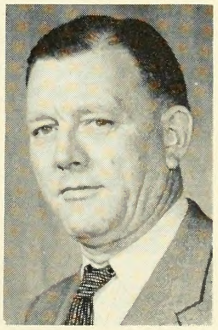


Hughes

A Guilford County native, Hughes has worked with the department since 1927. Prior to coming to Raleigh in 1954, he served as Assistant Division Engineer in divisions six and eight. He was educated at Oak Ridge Military School and Guilford College.

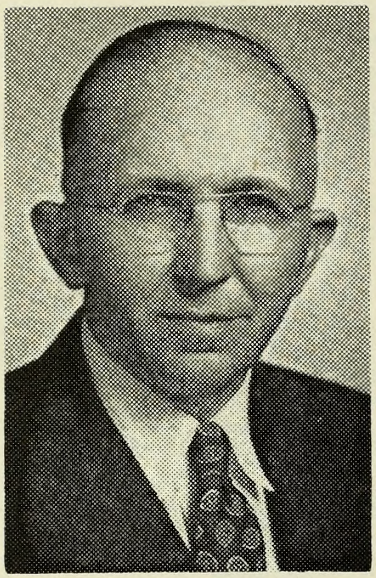
Hughes is married to the former Teddy Smith and they have one daughter, who is married.

DuPre began his highway career in 1936 as instrumentman and since that time has served as Office Engineer, Resident Engineer and District Engineer and was named Assistant Division Engineer in the Fourteenth Division in 1955.



DuPre

The new Area Maintenance Engineer is a veteran of World War II and has been a member of the Sylva Methodist Church, Sylva Rotary Club and served two terms as president of the Sylva PTA. Dupre is married to the former Martha Critcher and they have one son.



Earl Crump Dies

Highway employees throughout the State were saddened recently by the death of Earl A. Crump, Assistant Chief Engineer for Roadway, Right-of-Way and Location.

Crump died at his home in Durham after a long illness. Funeral and burial services were held in Wilson, with a large number of highway people in attendance.

In the words of Director Babcock, "He will be hard to replace."

A native of Lumberton, Crump received his education at Tri-State College of Engineering in Indiana, and at N. C. State College. During his early years of highway work, he was an instrumentman on construction jobs in Yadkin and Surry Counties. Later he was a Junior Resident Engineer on projects in Wilson, Wayne, Pitt and Greene Counties and in 1935, was named Senior Resident Engineer in charge of road and bridge construction jobs in Craven, Onslow and Carteret Counties and later in Robeson, Vance, Johnston and Wayne Counties.

Crump was named Claims Engineer in 1939 for the old Sixth Division at Asheboro. Several years later he was promoted to Assistant Division Engineer at Wilson. In 1953, he moved to Raleigh as head of the department's first personnel office. Three years later, he was transferred to Durham, heading up the Fifth Division, and came back to Raleigh in 1957 in the new position of Assistant Chief Engineer.

He was active in the work of the Highway and Prison Employees Association, which he had served as president, and had served on the State Personnel Council since its organization.

Deepest sympathy is extended to his widow, the former Sarah Dillon of Wilson.

Engineering Promotions

Two new appointments in the Design and Right of Way Section were announced by Director W. F. Babcock.

R. W. McGowan of Raleigh was named Assistant Chief Engineer for Roadway and Right of Way and W. A. Wilson, Jr. elevated to the post of State Design Engineer.

McGowan moves into the Assistant Chief Engineer post replacing Earl Crump, who died recently. In the new position, McGowan will direct location and design of highway projects and will coordinate work of acquiring necessary rights of way for road construction.

A native of New York, McGowan attended Clemson College and worked for several years in private construction firms. He joined the State Highway Department in 1937 as a junior draftsman and after several promotions, was named State Design Engineer in 1958.

Married to the former Mildred Butts, the McGowans live at 3101 Georgian Terrace in Raleigh.

W. A. Wilson, Jr., new State Design Engineer, is a Person County native and a 1950 graduate of N. C. State College. He joined the Highway Department in that year as a junior draftsman and, until the current appointment, was supervising all interchange and intersection designs for the Roadway Department.

In his new post, Wilson will head up all roadway design and will be responsible for all preliminary and final roadway plans which are submitted for contract bids.

Wilson is a World War II Army veteran, serving in the European, Middle East and African areas. He earned four bronze stars and, for several months, was held as a prisoner of war by German forces.

Married to the former Louise Long Walker, the Wilsons have one daughter and make their home at 1310 Dogwood Lane in Raleigh.



McGowan



Wilson

In announcing the appointments, Highway Director W. F. Babcock said he is "pleased to have available within department ranks persons of the ability of Mr. McGowan and Mr. Wilson."

"I know that both of them will bring to their new positions the same kind of initiative and ability which has brought them steady promotions within our organization over the years and has earned for them an excellent record of public service," said Babcock.

Charles R. Smith has taken over the duties of District Engineer in the Tenth Division, succeeding Thomas F. Royall, who retired on February 1st, after more than 40 years of service with the Highway Department.

Smith formerly served as office Engineer at Albemarle. He is a native of Orange County and was educated in the Mebane schools and at Smithdeal Massey Business College in Richmond, Va. His highway work dates back to 1929, when he came with the department as a rodman. He was serving as Senior Office Engineer at Albemarle when he entered the Army in 1942. Following his discharge with the rank of Major, Smith returned to the department.

The new District Engineer is married to the former Cora Mae Hege of Lexington and they have two children.

Royall is a native of Yadkin County and joined the highway department in 1919 as a Rodman, later serving as Instrumentman, Inspector, Junior Resident Engineer and Senior Resident Engineer. He became a District Engineer in 1931. He is a past president of the State Highway and Prison Employees Association and has served three four-year terms on the Teachers and State Employees' Retirement Board.



From The Director's Office

Dear Fellow Employees:

The people who keep the weather records tell us we have just gone through the worst March in history. Record snowfall amounts up to six feet, with huge drifts, have covered our roads and temperatures have been consistently lower than normal.

Employees of the Highway Department have set a few new records themselves for hard work and long hours under the worst possible working conditions. But the highway story of February and March cannot be told with statistics.

It is the story of people—hard working people—and I could not let this opportunity pass without expressing the sincerest appreciation of the Department and the Commission for the job which has been done.

Perhaps never before have you faced greater problems in your work. Rarely have you been called upon to put forth more effort. Never have you done your work so well and brought more credit to yourselves, your jobs and to the public service which the Highway Department offers to its people.

Many of you worked around the clock and some as long as 30 hours without sleep, and the storms were spaced just far enough apart so that one snow could not quite be cleared before another came. In spite of this, the work was carried forward even though some roads had to be scraped as many as six to seven times and drifts covered up what you had just done in some cases.

Much has been said about the hardest hit counties in the Northwest, but we are well aware of the tremendous problems that faced other counties throughout the West, Piedmont and even the Southeast. In addition to clearing their own snow, many Divisions sent men and equipment to the Northwest to help.

Come another winter, we hope to have more and better equipment to help you in snow clearance work.

We are all hopeful that road damage will not be severe as expected, and that all of you in offices, shops, and on the roads will take advantage of the compensatory time off which you have earned.

You have every right to be very proud of your individual efforts and the teamwork you displayed in clearing the highways for traffic. It is a pleasure to be associated with a group of employees who will shoulder such a task and see it through, and your display of loyalty and devotion to your work is in the very finest traditions of public service.

Sincerely,

W. F. Babcock

W. F. BABCOCK



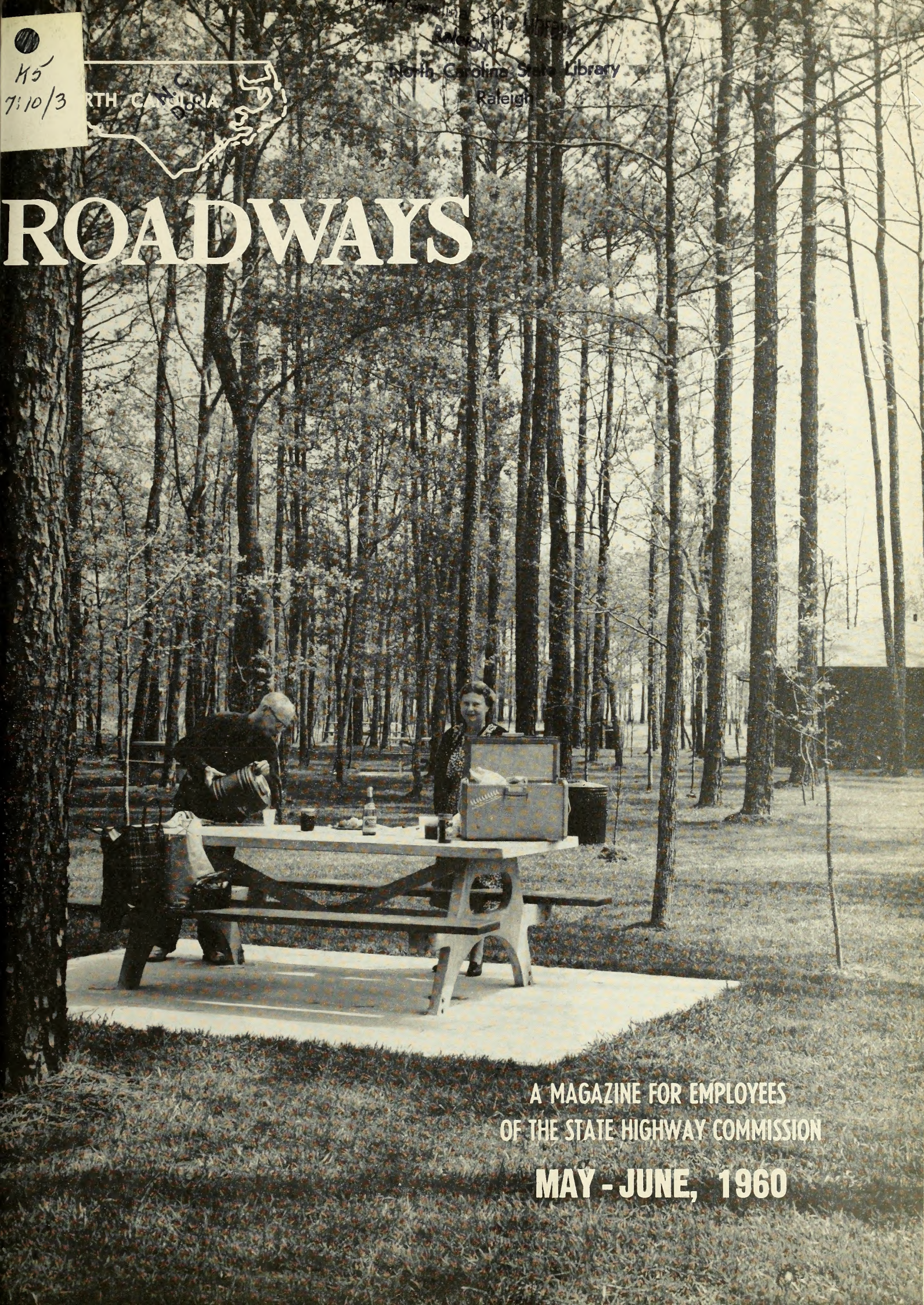
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ROADWAYS

A MAGAZINE FOR EMPLOYEES
OF THE STATE HIGHWAY COMMISSION

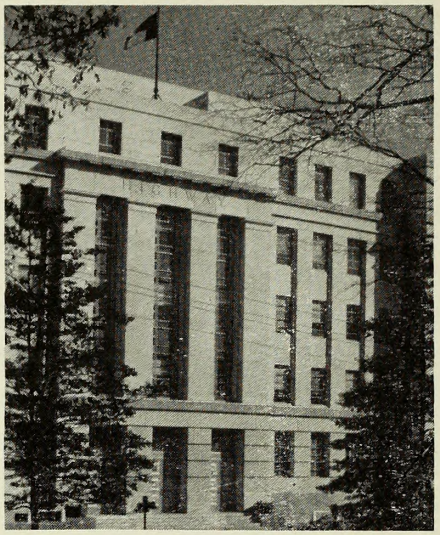
MAY - JUNE, 1960

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A Publication For
N. C. Highway Employees

Volume X
Number 3

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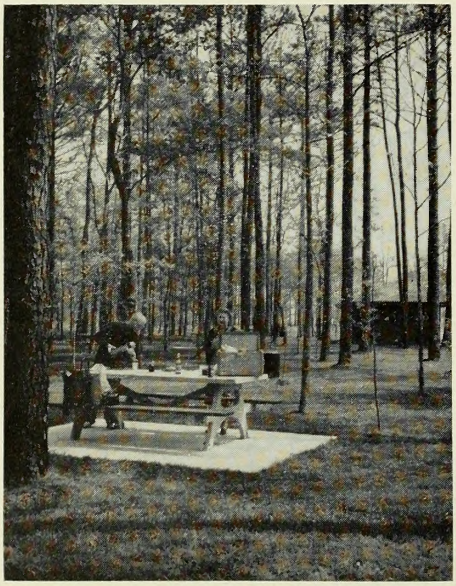


May-June

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Jeanne Hawthorne.....Assoc. Editor

Luther H. Hodges.....Governor
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Robert Bunnelle . . . James W. Mason
Fletcher H. Gregory, Jr. . . . R. T. Morris
Ralph L. Howland . . . . . J. Lee White
W. F. Babcock.....Director of Highways

The Cover



The inviting scene on our cover shows some of the facilities available to tourists at the new rest area recently completed on Interstate 95, near Selma. The rest area offers the use of picnic tables, outdoor furnaces, water fountains and rest room facilities to passing motorists. Taking time out for a picnic lunch at the rest area are Mr. and Mrs. Richard D. Reed, en route from New York to their retirement home in St. Petersburg, Fla.

Photo by H. L. Powell

New Color Maps Ready

"From the mountains to the sea" is the theme of the State Highway color maps for 1960.

The front cover of the map shows a view of western North Carolina, near Mount Mitchell, and the back cover features a coastal scene showing a fisherman with his nets and two small children looking on. The phrase, "Variety Vacationland" appears on both covers in red and black lettering.

The map side shows Interstate routes in green, US routes in red and NC numbered routes in black against a white background. Two new insert city maps have been added this year. They are High Point and Rocky Mount. Other insert maps include Winston-Salem, Greensboro, Charlotte, Asheville, Durham, Fayetteville, Raleigh and Wilmington.

Many points of interest are shown in color on the pictorial side. There are color photographs of the State Capitol, along with a picture and welcome message from Governor Hodges. Also pictured are: tourists photographing a black bear in the Smoky Mountains National Park, a fox-hunting scene in the Sandhills, Roanoke Island's Elizabethan Gardens, a mountain campfire scene, two fishermen displaying prize blue marlin catches, a scenic view of the Blue Ridge Mountains, two restored homes in Old Salem, a fishing pier shot, a view of New Bern's Tryon Palace, the Ocracoke Lighthouse, State College's Nuclear Reactor, musicians performing at the Brevard Music Festival, part of the scenic drive from Old Fort to Ridgecrest on US 70, Wilmington's Orton Plantation and an azalea-decked park in Wilmington.

Some 300,000 copies of the maps were printed by the Baughman Company of Richmond, Virginia, for free distribution.

MOVING ? ?

If you are planning to move soon, please let the staff of Roadways know so your address can be changed. Here's how:

Send your present address:
Joe Jones
25 Oak Street
Asheville, N. C.

Along with your new address:
Joe Jones
1031 N. Plaza
Winston-Salem, N. C.

On a post card to the Public Relations Department, State Highway Commission, Raleigh, N. C.

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Broughton Cites Secondary Road Progress

It is a pleasure for me to be in Dunn tonight, and I would like to use the few minutes allotted me to discuss with you our North Carolina State Highway Commission's policies, plans, and accomplishments on the State's 58,000-mile secondary road network.

What I shall say will be largely a review of what we feel are significant accomplishments on rural roads. At the very outset, I would like to list for you what I feel to be the TEN most important achievements. Then, I would like to deal specifically with each point.

(1) A special secondary roads department was established for the first time to administer uniform secondary road policies of the Commission, to see that the paving and stabilization program of the Commission was carried forward properly.

(2) Established, for the first time, a yardstick for measuring secondary road needs and made it uniform for every county.

(3) Authorized North Carolina's first Statewide secondary road NEEDS study for both roads and bridges in order to highlight sub-standard conditions.

(4) Set up North Carolina's first official Statewide secondary road budget along with procedures to allocate funds on the basis of demonstrated need.

(5) Established the first Statewide priority program for both paving and stabilization.

(6) Prepared and presented to 100 County Boards of Commissioners the first definite annual secondary road improvement program.

(7) Made available, for the first time, comparative ratings for every surveyed road, making these ratings available to any citizen at every county courthouse in the State.

(8) For the first time the full State Highway Commission, acting in public session, reviewed and adopted every County's secondary road program, following concurrence from every County Board of Commissioners.

(9) Established the first cooperative secondary road research program to improve maintenance and construction practices aimed at preventing excessive secondary road damages from weather, traffic, etc.

(10) In three years paved or approved for paving 1,700 miles of secondary roads carrying 50 or more vehicles daily. (18 percent of all such roads in the State). Stabilized 2,500 miles of roads carrying less than 50 vehicles per day. Improved 200 secondary road bridges to meet desirable load limits and widths. Paved 221 school drives. Paved 85 business and industrial access roads. Expended 90 percent of all secondary road funds on paving, improving, or maintaining school bus routes. (Total three-year secondary road expenditure approximately $150,000,000 which represents 60¢ of every highway dollar.)

There are, of course, many other specific accomplishments of this Commission, but I believe these ten are basic. It has been suggested in some quarters that it is time to get started with secondary road improvements. It would seem that persons who suggest this are uninformed about the considerable progress which has been made.

Our Commission resolved, three years ago, to set up a reasonable and financially sound secondary road program aimed at fairness and equal treatment to all our people. It is further aimed at equalizing road service in every County of the State and according to a well-planned and consistently administered long-range program.

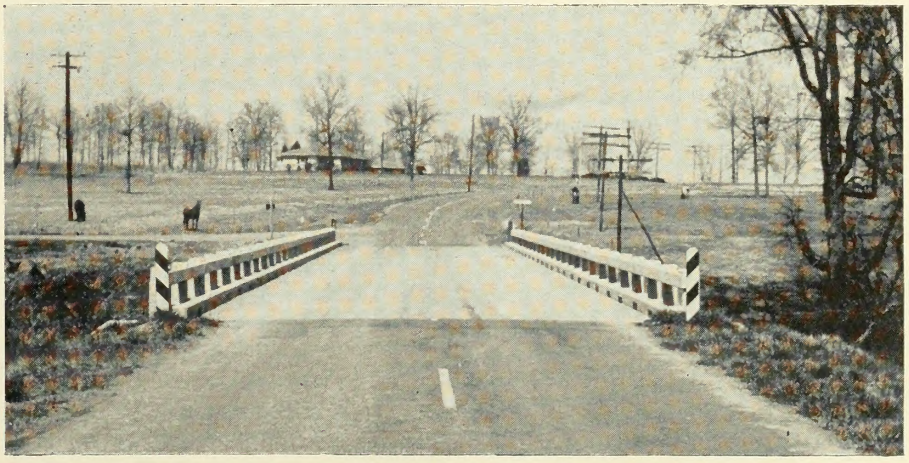
We have held out no false hopes of paving every road in the forseeable future. Such is neither practical nor possible without heavy additional gasoline taxes.

Our Secondary Road Studies point to a large and costly long-range need. This fact, more than any other, calls for an orderly, consistent program where each improvement project can be fully defended.

North Carolina's present secondary road program is based on the belief that we should accept and face the facts and then bend every possible effort to care for greatest demonstrated needs first.

SECONDARY ROADS DEPARTMENT

When this Commission took office on July 1, 1957, it found there was no specific administrative department to handle secondary road matters even though six out of every seven miles of public highways are on the secondary system. This Commission established the Secondary Roads Department. The Secondary Roads Officer who heads this Department has no authority to pave any road. This authority, by statute and by fact, rests with the full State Highway Commission. The actual paving and stabilization programs presented annually for mutual adoption by the County Boards of Commissioners and the State Highway Commission are prepared by 28 Division



Here is a well-surfaced Secondary Road with adequate bridge width and good sight distance on the curve.

and Assistant Division Highway Engineers, 33 District Engineers, and some 80 County Maintenance Supervisors. We feel that these people who know the roads best and who now have a uniform standard for measuring need should initiate these annual plans.

There are some today who would advocate a return to the former system, or I should say systems for there were 14 different ones, and allow one or two persons within an eight to twelve county area to pick roads for paving.

However, benevolent such persons might be, it is a proven fact that differences of treatment in the past have allowed tremendous inequities to grow up. Both our 1957 and 1959 Statewide studies of secondary roads showed some counties to have well over 75 percent of their secondary roads paved while other counties had as little as 10 to 20 percent hardsurfaced. One County in the State showed a proportionate secondary road need of only 5/100's of one percent, while another County had almost four percent of total Statewide need.

The Secondary Roads Officer and his staff are in almost constant contact with the County Commissioners throughout North Carolina. Every Board has been visited at least four times and many have been personally contacted more frequently than that. The reason for such contact is very simple. Duly elected local officials have a right to know Highway Commission plans in their area. We have even asked them to go further and to recommend to our engineers and the Secondary Roads Department what percentage of available funds they feel should be used to pave roads in accordance with priority schedules and what percentage should be used for stabilizing and improving unpaved facilities.

While such County Commissioners do not have, and in most cases do not want, final authority in expenditure of State funds, we feel they should be well acquainted with planned work before it is done. Their cooperation has been magnificent and the Board of Directors of the County Commissioners Association has voted confidence and support in our program for the last two years running. To further acquaint these officials with accomplishments, the Secondary Road Department prepares annual financial statements and presents them to each County Commission Board — statements which show to the last penny exactly how all secondary road funds were used within the County for both maintenance and improvement.

We feel indeed fortunate to have as Secondary Roads Officer a man who, himself was a County Commissioner for 25 years, Chairman of his local Board for 17 years and a former President of the County Commissioners Association of North Carolina. But it should be made crystal clear that he does not set secondary road policy, he does not order roads paved. He is an administrative department head who is charged with the responsibility of carrying out Commission policies and Commission approved project improvements.

MEASURING SECONDARY ROAD NEEDS

This Commission established the first uniform Statewide yardstick for measuring and analyzing secondary road needs. The first study was completed in the Fall of 1957. Since new homes are built, school bus routes change, rural churches go up, the Commission has authorized a new study to be made each two years.

The yardstick is defined simply as that level of highway service which we feel should be provided eventually on every secondary road. Among other things it provides that all roads with 50 vehicles or more using them daily should be rated for paving on a priority basis, and that any paved road should have a surface at least 18 feet in width with provisions for adequate drainage, a good base course, and that any bridge should have a capacity of at least eight tons.

For unpaved roads this minimum level of service is defined as an 18-foot wide travelway with a suitable aggregate or soil base to facilitate all-weather traffic and with bridges at least of an eight ton capacity.

The 1957 study showed North Carolina with 34,000 miles of unpaved roads. Of this mileage 9500 miles were rated for paving because they carried more than 50 vehicles daily. Paving these roads would cost an estimated $250,000,000. The 1957 survey showed 5,000 sub-standard secondary road bridges. Bringing them up to standard would cost an estimated $70,000,000. Improving roads with less than 50 vehicles a day to minimum unpaved standards would cost an estimated $245,000,000.

The fact that these figures are in themselves staggering, and I might say quite sobering, provides all the evidence we should need for establishing orderly, long-range improvement programs.

FIRST SECONDARY ROAD BUDGET

Prior to 1957 there was no specific budget for Statewide secondary road improvements. Available funds were allocated to the various Divisions on the basis of the area, population, and mileage in each Division. I will not deal with the fact that such a formula had no connection with actual needs, except to mention it in passing. My main point is that each Division had a so-called "betterment fund" which was to be used for both primary and secondary road improvements. The local Commissioner and/or Division Engineer could spend $1.00 or $1,000,000 on secondary roads. The full Commission rarely ever considered individual secondary road paving projects.

Under the present Commission a definite, and I might add rather large sum is specifically earmarked for secondary road improvements. Actually our Commission has, in the past three years, authorized $64,000,000 for secondary road improvements over and above annual maintenance budgets.

Today procedures have been established whereby the secondary road budget, once prepared by the Commission, is submitted to the Advisory Budget Commission, and finally approved by the North Carolina General Assembly. Thus, the people now know from year to year exactly how much we will have available for secondary road improvements, and it is the first time in North Carolina highway history that this has been the case.

PAVING AND STABILIZING ON A NEEDS BASIS

Paving secondary roads is an important, but expensive, practice. The average cost to pave a mile of secondary road in North Carolina is $22,000. This we might call the down payment. Once that mile is paved, the annual maintenance cost rises from approximately $400 per year to approximately $800 per year. I mention these costs not to excuse our Commission from its rightful responsibility to pave roads, but merely to emphasize the importance of paving them strictly on a merit basis. Partiality, personal prejudice, or as has been charged by others, political favoritism has no place in a highly complex, important and costly road program. This is the reason why our Commission in cooperation and with the advice of local officials, engineering experts, and our own field personnel, established a points priority paving program.

The point program was established after a careful study of previous practices in each of the 14 Highway Divisions and after a careful study of the methods of other States. We do not claim perfection for it. It is kept under

constant review for any possible improvements which might be suggested, but we do not feel that a merit program such as it is should be scuttled simply because some people cannot show enough points on their road for it to be considered in the paving program.

Some have said the point system is not the right approach to paving roads. To those who have such opinions I would ask these questions. What is wrong about paving a road with 40 houses before you pave a road with 20? What is wrong with giving points to the number of school bus trips made daily and giving more points to a road with four trips than to a road with one? Why should we not count up the number of churches, school buildings, public facilities, and homes for these are the characteristics which lend importance to a secondary road? The more such facilities we find along a road, the more service it is providing for our people.

What is wrong with a merit paving program for secondary roads which is followed carefully and closely?

ANNUAL SECONDARY ROAD PLANS

Our Commission is working under a policy which calls for the preparation of a definite improvement program on secondary roads for every County every year. At the beginning of each fiscal year the full Commission budgets total secondary road improvement funds. These funds are set aside especially for such work and are encumbered or held in reserve until the work is completed and the final charges paid. The allocation from this total budget for work in each County is based on that County's percentage of Statewide need as determined by the engineering studies of actual road conditions and costs to improve. A County with one percent of the measured need gets one percent of the total funds.

With this allocation in hand, our field personnel prepare an annual county plan for each of the 100 Counties. It shows proposed paving on the priority system and proposed stabilization of unpaved roads. This program or proposal goes first to the local County Board of Commissioners for their study and advice. Once secured, the plan then goes to the Secondary Roads Department in Raleigh for presentation to the State Highway Commission for final adoption. After such adoption, the Secondary Road Plan in each County becomes a virtual work schedule and all funds are reserved for the approved projects. This Secondary Road Plan is posted at the courthouse in every County. It is even published in the newspapers of the County before the work is done. Also, posted at the courthouse are the point count ratings for every surveyed road within the County. Thus, any person who lives along a secondary road can see exactly how his road stacks up with all other roads in the County. Our Commission feels very strongly that such ratings are vital public information and should be readily available to any citizen. Copies are also placed in District offices of the Highway Commission, in Division offices, and in the Secondary Roads Department itself. Any citizen who wishes information about his road has four places to find it, and in addition to full Commission public hearings which are held regularly throughout the State, our Division Engineers hold monthly public hearings for people in the various Counties who wish to inquire about the status of their road, whether such inquiry concerns paving, stabilization, or maintenance. All of these public hearings are well publicized in the newspapers of the State so that persons who wish to attend may know the time and place.

COOPERATIVE RESEARCH PROGRAM

In recent years, and especially in the last two, North Carolina's secondary roads have suffered heavy damage from severe winter weather. The greatest damage was concentrated on lightly paved secondary roads, and such damage from the most recent of these storms has been reckoned in the millions of dollars.

Our highway engineers have learned much over the years about improvements in maintenance and construction procedures, and modern techniques have reduced this costly damage. But our Commission felt that more should be done, and so we entered into a contract with research engineers at North Carolina State College and other colleges, with the U. S. Bureau of Public Roads, and with our own personnel to launch an exhaustive research program into many facets of secondary road construction and maintenance. One of the most important of these is the study on frost damage. Test roads have been constructed in the west and I might say they have just undergone a rigorous test in the recent snow storms. Other studies have been started into the matter of traffic generation on secondary roads as these facilities are used more and more by persons who are engaged in part-time agriculture and part-time industrial or business work in nearby cities and towns. We need to know the changing trends and habits of secondary road drivers. Bridge designs are being tested. Various base courses and surface treatments analyzed and various mixtures of materials are undergoing rigorous tests under actual conditions.

We are confident that the results of these secondary road research programs will result in a better service to our people and this Commission is proud to have initiated and continued such a cooperative research program.

SECONDARY ROAD WORK ACCOMPLISHED

Now we come to actual accomplishments on the secondary road system of North Carolina in the three years of this Highway Commission's administration. You will recall I said 9,500 miles of roads were rated for paving in 1957. To-date, 1,700 miles have either been hard-surfaced or are approved for paving in our current season. This three-year accomplishment represents 18 percent of all the remaining unpaved roads which carry 50 or more vehicles per day. In addition, this Commission has stabilized or approved for stabilization to minimum levels of road service more than 2,500 miles of secondary roads. We have approved or expended in a three-year period approximately $150,000,000 on paving, improving, or maintaining secondary roads, and it would be well to emphasize that 90 percent of this $150,-000,000 has gone to roads which carry school buses. Perhaps it would be well to point out that 60 percent or 60¢ on every highway dollar now goes to the secondary road system of North Carolina.

Our Commission adopted a policy of paving school drives and in the three-year period, 221 driveways to 221 North Carolina schools have been hardsurfaced or are currently approved for work at a total cost of $522,795.08. In addition we have paved or approved for paving access roads to 85 rural industries or public buildings at a total cost of $748,-952.49.

In summary, since 1957, this Commission has earmarked more for secondary road improvements than has been spent in any other period, except during the bond issue. Great progress has been made, but our Commission feels it cannot delnde the people of North Carolina by promising more than can actually be accomplished. We have found no method whereby an instant highway can be served up by merely adding hot water. To pave roads we must first have the down payment (construction funds). We must

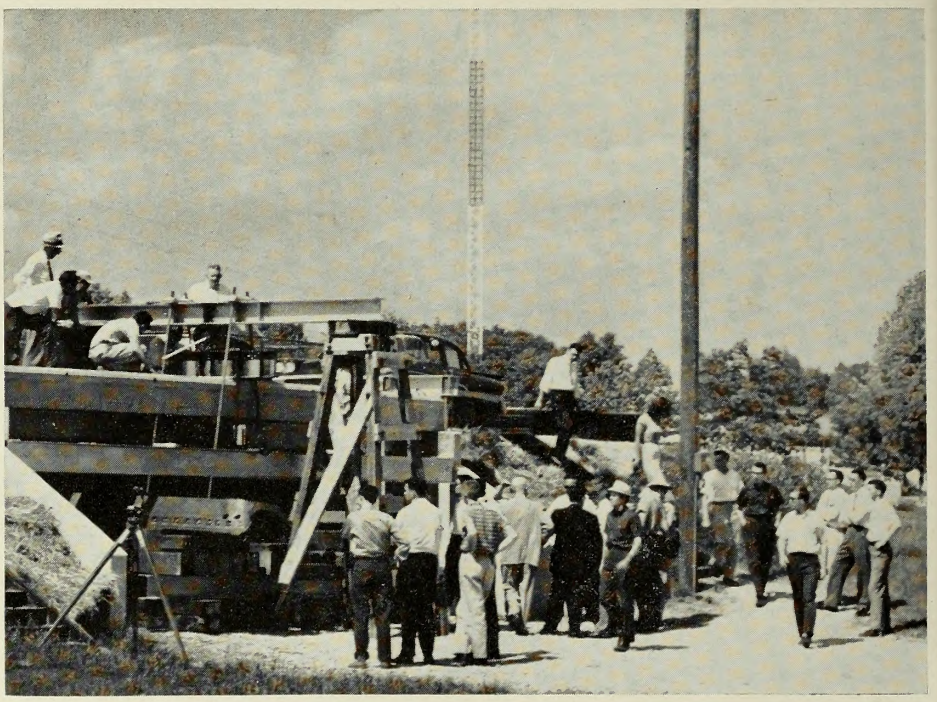
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New Type Prestressed Concrete Beam Tested

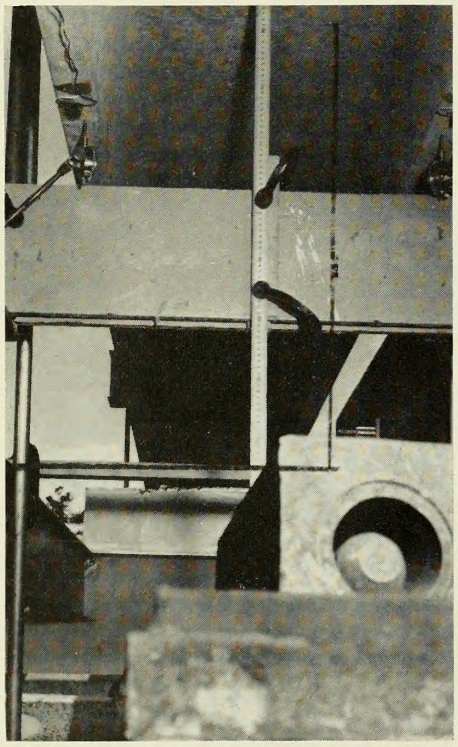
Lower Cable Breaks at 34,500 Pounds

Load-bearing tests were run recently on a prestressed concrete slab at the State Highway Commission's bridge department near the fairgrounds. The tests are the result of a cooperative arrangement including N. C. State College, N. C. State Highway Commission and N. C. Products Company of Raleigh, N. C.

In this instance, a single unit, Double-T section was tested to determine its initial cracking point and ultimate break under a static load. A hydraulic jack was used to furnish compression and a conversion table determined the ultimate breaking load based on the area of contact of the loading force with the beam itself. Hair-line cracks appeared between twelve and fifteen thousand pounds pressure at the point where it was applied. From fifteen to twenty-seven thousand pounds pressure, the slab recorded additional cracks, however it did not come to a complete break. Normally, when the pressure is released, the slab returns to its original form and little (if any) damage is done by these small hair-line cracks. After applying thirty four thousand, five hundred pounds pressure, the ultimate failure occurred when the lower cable broke, however, when the pressure was released, the slab returned almost to its normal position because of the tension remaining in the other four cables. There are five prestressed cables in each beam. S-4 Strain Gauges recorded the longitudinal stress on the beam and Deflection Gauges recorded the vertical movement as the load was applied.



The crowd waits for the test to begin. Professors, students and highway engineers inspect the set-up used in testing the beam.

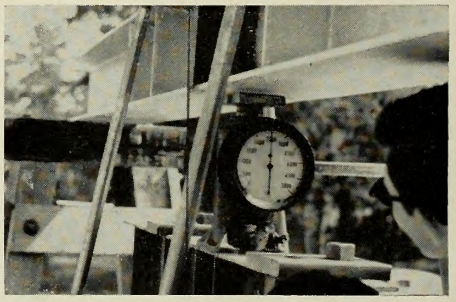


At the top, you can see the S-4 strain gauges used to record the longitudinal stress on the beam at the breaking point. Directly below, deflection gauges are positioned to record the vertical movement.

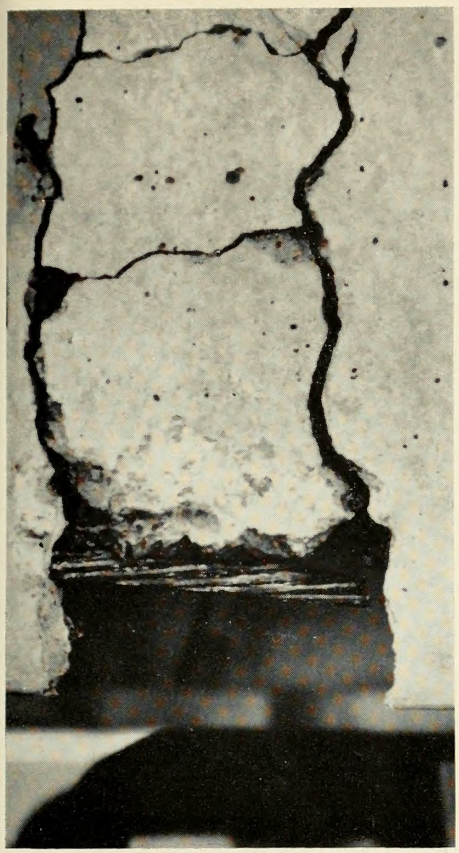
Each slab is approximately 30 ft. long and weighs about 7000 lbs. A complete bridge can be made up of any number of these slabs to form any length or width desired. They are connected by a V-shaped joint which theoretically spreads some of the load strain under the vehicle's wheels to the slabs on either side.

It has been said that several foreign countries are ahead of the United States in the use of prestressed concrete as a substitute for steel. Hence, the outcome of these tests will be of great interest to others as well as to ourselves since foreign students in the School of Engineering will be able to take this information back to their homelands and a great benefit will result for all.

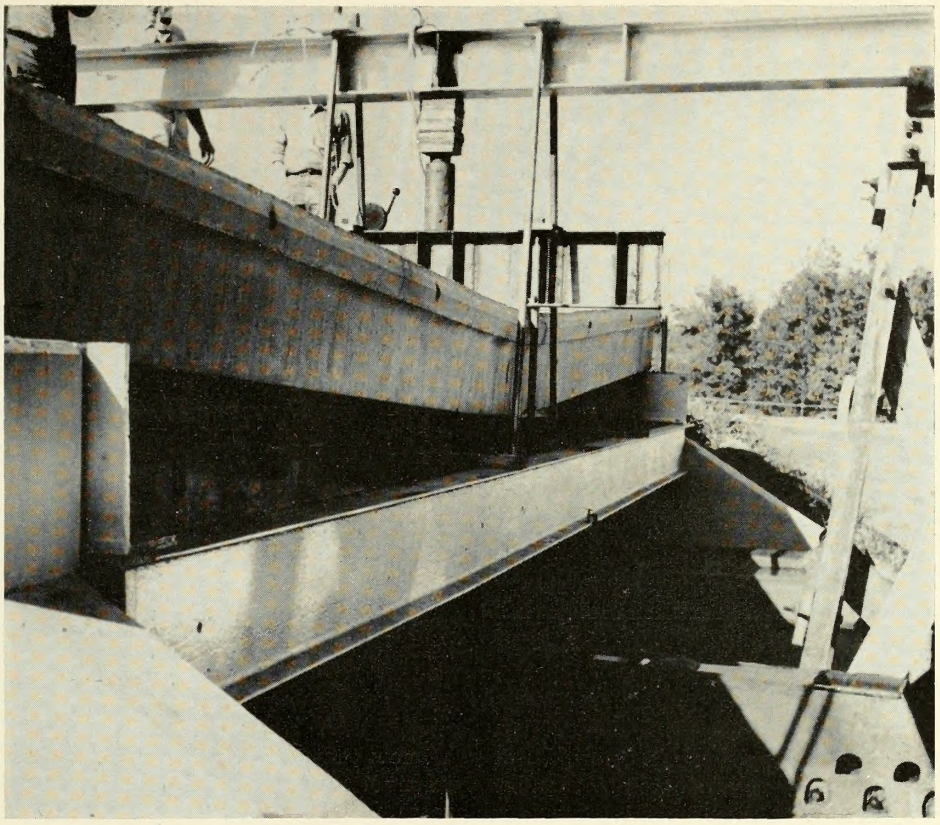
Primarily, the State Highway Commission is interested in the distribution of the load as a moving force of known weight is applied to the finished product. This, of course, will be invaluable



A hydraulic jack was used to furnish compression to the point of ultimate failure.



Here is a close-up of the broken cable at lower part of vertical leg.



The final break of the lower cable occurred at 34,500 pounds. A deflection of 12 inches was recorded.

information in the construction of bridges and other load bearing situations too numerous to mention. These tests will be made in the near future.

In the beams construction, the concrete is poured over longitudinally placed prestressed strands which remain under tension. However, the beams in the test bridge also have hollow tubes placed transversely so that cables may be added later to increase the strength of the completed bridge.

The longitudinal stress and vertical movement of the slabs will be recorded as various loads are applied using loaded trucks of various weights, crossing the bridge at predetermined speeds. In this manner, the recording devices can determine the actual distribution of the loads on the bridge. So far, this information has only been theoretical. These loads will be increased gradually until the ultimate failure of the short span bridge occurs. Since there are five prestressed cables in each beam, it is merely a matter of conjecture as to what the final damage will be at the breaking point and what the total load will be.

Fred Moreadity and J. S. Smith of Raleigh, Man Pan Hui of Hong Kong, Sosta Parathiras of Richmond, Va., and David Morris of Shelby, all graduate students in the School of Engineering at N. C. State, conducted the tests. Technical co-directors of the project are Prof. Charles R. Bramer and Dr. M. E. Uyanik of the Civil Engineering Dept. at the college.

Text and photos by J. P. Bourke

Here And There

Summer ferry schedules on the three State-operated ferryboats went into operation in May and late night trips will begin around the middle of June. Ferries are operated over the Alligator River, Oregon Inlet and Hatteras Inlet.

Design and costs analysis studies are being rushed to completion by the Planning Department for construction of a new crossing of the Cape Fear River in Wilmington. Two proposals have been advanced. One is for a high level bridge to direct traffic into the heart of the Wilmington business district and take it through town on a system of expressways. The second proposal is for a low-level bridge to be built north of the existing two-lane crossing, channeling traffic into town via Third Street and directing by-passable traffic around the northern and eastern perimeter of Wilmington and into the shipyard area. The latter plan would take oil tanker traffic away from downtown Wilmington streets and onto a high-speed controlled access expressway.

Several thoroughfare plans will be presented to the Commission for adoption at its May 26th hearing. These were worked out by the Advance Planning Department, in cooperation with local municipal officials. Largest of the plans to be presented to the Commission will be a street and expressway proposal for the city of Durham.

Effective Wednesday, June 1st, employees who have been working on an 8:30 to 5:30 schedule, will begin work at 8 a.m., and leave at 5 p.m., in accordance with the summer working schedule set forth for State employees. The summer work schedule is effective through Wednesday, August 31st.



From The Director's Office

Dear Fellow Employees:

By now, all of you know that a new salary plan for State employees has been adopted by the State Personnel Council and will become effective soon (actually June 18 for Highway employees).

In developing this plan, the State Personnel Department and Council conferred frequently with the administrative staff of the Highway Department.

As this is being written, we are contacting Department Heads, Division Engineers and other supervisory personnel to give them as much information as we possibly can on how the new plan will affect you. I urge you to contact your supervisors before July 1, because I know you will have several questions to ask them. Even now, there are some points which you should know about. First of all, while the plan does not provide for a general salary increase for all employees, it does have several immediate benefits which will affect many of you.

Among these benefits are:

(1) Increases to the new minimums for those employees whose salaries fall below.

(2) Approximately 1800 to 2000 employees will be unfrozen because of an increase in the maximum of salary ranges.

(3) Increment raises will be increased in value, effective at the payroll period beginning June 18, 1960.

(4) The amount of your annual increment will increase with seniority.

(5) In general, the maximums have been raised for all classifications.

We feel these are solid accomplishments and we are happy to have had a part with the Personnel Department and Personnel Council in their development.

I hope that, as more information is made available to you through the supervisory personnel, that you will agree that the new plan is another step forward in the general improvement of our personnel policies. We certainly hope so for we have worked toward that end.

Sincerely,

W. F. Babcock

W. F. BABCOCK

N. C. S. H. P. E. A. Association News

VOLUME 9—EDITION 3 MAY-JUNE

INSURANCE FEATURES — Perhaps you did not know that your group insurance program provides double indemnity protection. Your beneficiary would receive double the face amount of your Group Life Insurance if you were accidentally killed on or off the job. "On-the-job" protection is an added feature that went into effect in the current policy year. Consult your insurance booklet or write your secretary or Mr. Witherspoon's office for details if desired. See page 7 in the booklet for payments for loss of limbs.

NO INHERITANCE TAX is payable on life insurance paid to a beneficiary up to $60,000 Federal and $20,000 State - provided the insurance is paid to a named beneficiary; if paid to an estate, the insurance is subject to local property tax laws.

BENEFICIARIES can be changed. Do you have the right one named on your Group Insurance Policy? If your wife was named, and has since passed on, have you changed your beneficiary? If you were single when you signed for the insurance originally, designating some person or your estate, and you have since married, have you changed your beneficiary or desire to do so? Remember, insurance and retirement funds in event of your death are payable to the last named beneficiary. If yours has changed, or you wish it changed, contact Mr. Witherspoon's office and/or the Retirement System.

DAILY ROOM AND BOARD for employees will be paid just as in the past for the allowable amount during the current policy year. This may be changed in the future to a reimbursable plan (reimburse employee only for amount he actually pays up to maximum allowable), but for the present and at least until September 30, 1960, this will be paid on the same basis as in the past. This is of particular interest to veterans who are admitted for treatment in Veteran Administration Hospitals.

NEW ID CARDS have been issued with the new certificates recently sent out to all employees covered under the insurance program. You should carry these with you at all times to facilitate identification upon admittance to a hospital, and to prove that you do have hospitalization coverage.

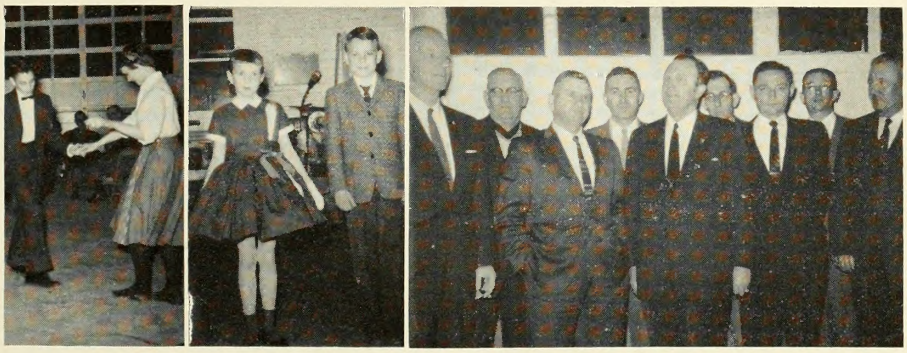
INSURANCE COMMITTEE met in Raleigh in April with officials of the home office of the Connecticut General Life Insurance Company. Experience from October 1, 1959, to March 1, 1960, was reviewed to compare the ratio of premiums paid to claims paid. The experience is not good at this point, and it is hoped this will greatly improve in the months ahead. There were 39 deaths among active employees in the 5-months period, and 13 deaths among retired employees, or 33 1/3 % of deaths were retired employees, whereas they pay approximately 7.5% of the premium. This loss ratio is a matter of grave concern at present - let us hope it shows rapid improvement.

EXPERIENCE RECORD for the 5-months period is shown below:

ITEM	CURRENT PAID PREMIUMS	CURRENT PAID CLAIMS	CURRENT % RETURN	TOTAL % RETURN FOR YEAR 10-1-58—9-30-59
Life	$161,914.02	$203,500.00	125.7	103.8
AD&D	22,337.65	9,000.00	40.3	40.3
A&S	98,905.04	93,120.11	94.2	85.7
Hospital	257.048.25	211,392.42	82.2	95.5
Combined Totals	$540,204.96	$517,012.53	95.7	93.8

Current guaranteed return to us is 92.5% of premiums paid (now 3.2% overpaid in claims). Guaranteed return previous year was 90.5% of premiums (3.3% overpaid that year.)

—Otis M. Banks, Secretary.



SCENES FROM DISTRICT MEET—Here are some pictures made at the recent district meeting of the Employees Association in Greenville. At the left, Van Everett and Frankie Lamm entertain with their version of the bop. Center, Margaret Elks and Carl Abee, who presented the Cha-Cha. At the right are some of the guests and others who attended the meeting: They are: Sig Hardesty, past president of the Association, and Assistant Chief Engineer; J. L. McDonald, Equipment Superintendent and also past president; Division Engineer Charles Snell; Chief Engineer Cam Lee; L. H. Gunter, Assistant State Maintenance Engineer and second vice president of the Association; Public Relations Officer Sam Beard; Controller Ervin Dixon; Personnel Officer Sam Badgett; and J. D. Parker, Sign Supervisor and Unit Chairman.

The Secretary Says

One way to boost your popularity is to forget it.

Some so-called open minds should be closed for repairs.

No use to advertise your troubles; there's no market for them.

Any "live wire" would be a very dead one without the right connections.

Religion is a cloak used by some people in this world who will be warm enough without one in the next.

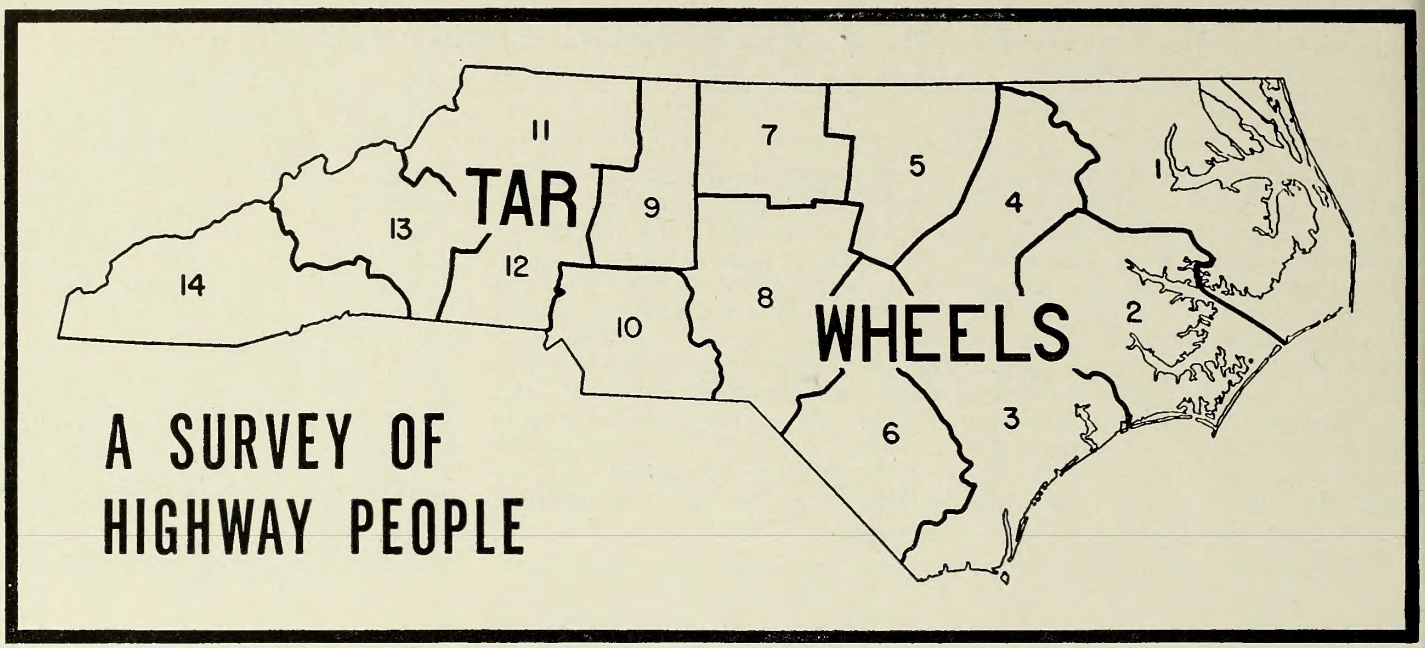
We recently heard a fellow described as being so crooked that he'd steal the harness off a nightmare.

Middle age is that period in a man's life when he'd rather not have a good time than to have to get over it.

Statistics reveal that women live longer than men. Could it be due to the fact that paint is a great preserver?

The choir was practicing a new anthem. "Now don't forget," said the choir-master, "wait until the tenors reach 'the gates of hell' and then you all come in."

—O.M.B.



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

BY JEWEL ADCOCK

Division Correspondent

LOCATION—Newest draftsman in the Department is *Katy Dearstyne.* Katy's husband is with Purchase & Contract. *Frances Smith* spent the Easter holidays visiting relatives in Rocky Mount. *Nell* and Jim *Murphy* took a trip to visit relatives in South Carolina during Easter. *Boyce Midgette* and family spent the holiday at his home, Buxton, on the Outer Banks. *Willie Hobbs* and his wife had a fine time visiting their children in Vero Beach, Fort Pierce and Tampa, Florida recently. And Easter they took another trip to see their daughter in Greenville, South Carolina.

BITUMINOUS — An early recovery is wished *J. A. McQueen,* Area Bituminous Engineer, who is ill in Rex Hospital. *T. V. Fahnestock* spent the second week in April in Division 11 touring the roads with Division Engineer Councill.

PERSONNEL — New cars abound in Personnel! The "bug" seems to have hit most everyone in the Department. New Falcons are owned by *Dave Richards* and *Russ Bullock;* a white Chevrolet Impala by *Dot Medlin;* a Renault Dauphine by *Fred Parker* and a Chevrolet for a second car by Department Head *Sam Badgett.* A nice cruise to Charleston, S. C. was enjoyed by *Fred Parker,* a Chief Petty Officer in the Naval Reserve, who took two weeks military leave during April. *Lyman Melvin* was Co-Chairman for the Raleigh Beauty Pageant this year, which is sponsored annually by the Jaycees.

LEGAL—*Harrison Lewis* flew to Dallas, Texas for several days in April to attend a Legal Seminar on Trial of Condemnation Cases. *Jim Bullock* reported an exciting trip to Augusta, Georgia recently to watch former Wake Forest classmate, Arnold Palmer, win in the Master's Golf Tournament.

ADVANCE PLANNING—*Carolyn Beck* had a recent tonsillectomy in Rex Hospital. *George Stephens* and family spent Easter weekend in Asheville and Gatlinburg, Tenn. While in Gatlinburg, George was on a panel of the East Tennessee Regional Planning Conference, sponsored by the Tennessee State Planning Commission. *R. J. Kimley* and family went to New Bern for the Easter holidays. While there, Kimley did a little fishing and reports his entire catch was two 12 inch goggle-eyed bass. An early recovery is wished Mrs. *Jim Prince,* who recently underwent surgery in Rex Hospital and is now recuperating at home.

CHIEF ENGINEER — The *C. W. Lees* visited Mrs. Lee's mother in Union, S. C., during Easter.

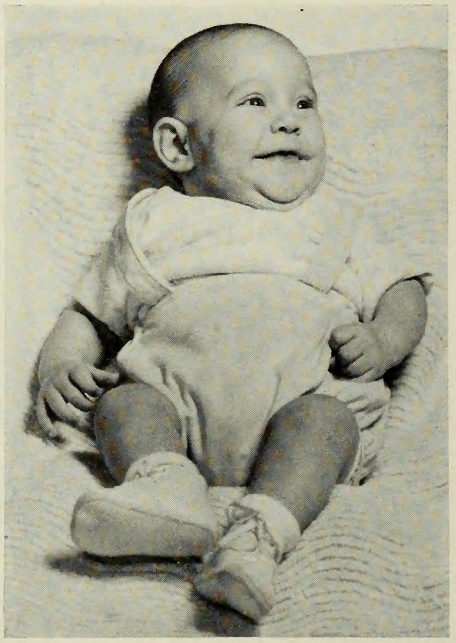
SECONDARY ROADS — *Carol* and Benny *Helton* went to Hendersonville to spend the Easter holidays with their parents.

MAINTENANCE—*Ethel Jones* spent a recent week in Dunn with her brother, Dr. Charles W. Byrd, who is recovering satisfactorily from a heart attack.

ROADWAY—Welcome to *Sam Stancil,* Clerk II, the replacement for *Garland Mitchell* who transferred to Reproduction. And it's nice to have *William T. Minter,* a new engineer in the Department. *Charles Heilig,* draftsman, has returned from nine weeks military leave with the N. C. Air National Guard.

CONSTRUCTION—Get well wishes to *Virginia McDonald's* mother, who recently underwent a major operation in Rex Hospital. Does everyone know that *"Slick" Hartman's* real name is Theodore Clarence?

PLANNING—Employees were glad to see *Doris Hall* back on the job after recovering from a serious automobile accident. *Jo-Ann Turner,* temporary replacement for Doris, moved to Burlington,



YES SIR, I THINK MY CANDIDATE IS GOING TO WIN—seems to be the expression on cute little William Wayne Rogers' face, whose father, W. J. Rogers, works in the Bridge Department drafting room. Born October 8, 1959, William Wayne was only three months old when this pictnre was made.

where her husband is with Western Electric. *Phyllis Nelson* vacationed the second week of April at home and enjoyed having her mother from New York as a house guest. A second son was born to Mr. and Mrs. *Don Corwin* April 6 at Rex Hospital. Congratulations.

SAFETY—Suzy Sterling, 14 year old daughter of *Ann Sterling* has followed in the footsteps of her sister, Lesley, by making the National Junior Honor Society at Hugh Morson Junior High the 19th of April. The Sterlings recently moved into a seven room home in the country near Wendell. *Mary* and Louis *Rajagh* are enjoying their new Volkswagen which they say will "park anywhere".

TRAFFIC ENGINEERING—*Ruth Parkerson* enjoyed a trip to New York over the Easter holidays.

EQUIPMENT — Two new additions to the clerical staff are Miss *Jo Ann Walters* and Mrs. *Carolyn M. Fowler*. *Mary Jane MacGillivray* resigned March 25 to move to Gary, Indiana. *Peggy Ferguson* transferred March 18 to the N. C. Hospital Board of Control.

ACCOUNTING—It's nice to have *Mary Leonard back*, who recently returned from maternity leave. *Fred Jones*, *Ray Harris* and *Bobby Nicholes* are new members of the payroll section. Good luck to *Lavonne Morgan* and *Helen Belton* who resigned April 15 to move to other cities. Fellow workers are glad that *Freda Webb* is back at work after a short illness. A speedy recovery is wished *Bill Turner* who has been having trouble with his back. Employees who motored down to Wilmington for the Azalea Festival were: *Faye Temple*, *Bettie Watkins*, *Betty Wall* and *Jo Eidenberger*. All reported a delightful time, though flowers were few. *Patricia Harrell* of Oak City and J. Michael Steinacher of Charlotte were married April 4 in the Oak City Baptist Church. The Reverend Carlton Roberson officiated. Patricia is secretary to *E. B. Baskett* and Michael is a student at State College. Home is 2209 Brewer Street in Raleigh.

MATERIALS & TESTS — Congratulations to *Barry Phlegar* upon his marriage April 15 in Mount Olive Baptist Church to Betty Duke. After a honeymoon in Western, N. C. and Tennessee, their home will be Route One, Raleigh. *A. Duke Morgan* vacationed the first two weeks of April at home enjoying visits from his grandchildren.

BRIDGE—Welcome to new employees: *Ostia Ralph Self*, *Richard A. Torbik*, and *James C. Robinson*. Rita Renee is the important new member of the *W. C. Calhoun's* household. She arrived March 9, 1960. James Reuben, Jr. is the new "attention getter" at the *James R. Wilders*.. His birthday is February 27. The *Dennis Wilsons* are proud owners of a pretty new home in Greenwood Forest, Cary.



RECOGNIZE ANYONE?—Some of the old-timers may recognize these people who were photographed in 1937 when they were employed in the Bridge Maintenance Department. Mr. Yount and Mr. Moore are deceased and Mrs. Erwin and Mrs. Hester are no longer employed with the State. Mr. Warren and Mr. Barnes have transferred to other State departments, but Mr. Scott, Mr. Taylor, Mr. Biggs and Mr. Markham are still with the Bridge Maintenance Department and have a combined service of over 150 years.

PHOTOGRAMMETRY—*Joanne Stevens* and husband, Ray, took a recent vacation trip to Canada. Florida for a week was the choice of the *Carter Reames* family. *Chester Gray* attended the Congress of Surveying and Mapping and the Society of Photogrammetry Conventions held recently in Washington, D. C. The Department has three new additions to its staff. *Don Green*, Photogrammetric Aide II attended N. C. State College and prior to joining the Commission did private tutoring in math and sciences. *Peter Malphurs*, Draftsman II, is a graduate of Florida State University, and is a former employee of Fairchild Aerial Surveys, Southern Tallahassee, Florida. Peter has a wife, Patricia, and two young sons. *Jim McClaskey*, Stereo Compiler II, moved to Raleigh with his wife Sandra, and son from Pensacola, Florida where Jim formerly worked with an aerial survey firm. They are living in a newly purchased home in Brookhaven.

REPRODUCTION—Two new employees have been added to Reproduction's staff. *Garland Mitchell* was transferred from Roadway and *Ronald Price*, a former employee of the News & Observer.

DIVISION ONE

BY M. ELWOOD COPELAND

Division Correspondent

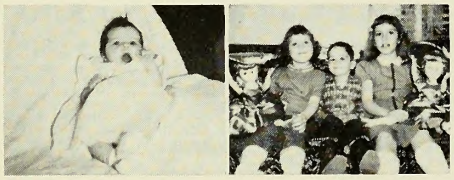
BACK from Weldon is *R. M. Saunders* and his survey party of the Location Department. They are now working out of the Elizabeth City District Office. Resident Engineer *W. J. Starr* has been transferred to Columbia and has taken up his duties on the new Alligator River Bridge project with is now under construction.



Maint. Foreman B. H. Phelps of Division I is the proud grandpop of this young man, who is six-week-old Jeffery C. McDonald.

THE NEW HOME going up in Elizabeth City's Edgewood belongs to Inspector *Alvin Hall* of the Construction Department.

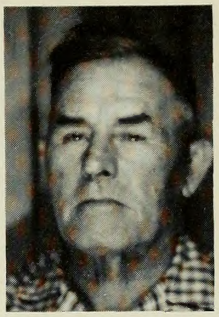
ENJOYING a visit with relatives in Alabama is Mrs. *W. F. Sessoms*, wife of our District Engineer.



These are the children of Automotive Parts Clerk and Mrs. Charlie P. Phelps of Roper. At the right Jacquline Ann, Charlie and Betty Elaine Phelps and on the left is the newest member of the family, Kathy Lynn Phelps.

ASSISTING in snow removal during the recent emergency in the western part of the State were the following from Division One: *Charlie P. Jennings, Roy Berry, J. W. Smith* and *Frank Daniels.*

CONDOLENCES to the family of *Samuel J. Moore*, who died April 18, after being unable to work for about two years; also to *John Raymond Dail*, whose mother, Mrs. Celia Dail, died March 26 after a long illness and to *Robert N. Williams*, whose mother, Mrs. Ida Williams, died April 18.



J. G. Twiford has been relaxing and taking it easy in Manatee, Florida, near Bradenton, since his retirement earlier this year after nearly 25 years of service with the State. Prior to his retirement, Mr. Twiford worked as a foreman in Bridge Maintenance at Point Harbor.

GET WELL WISHES are extended to *H. Carson Davis*, Motor Grader Operator, who has been out sick for some time; to *E. G. Credle*, Maintenance Foreman; to *J. Carson Monds* of Belvidere, who has had pneumonia; to *Arthur Thompson* who had the flu and to *Hilary G. Hobbs* of Pasquotank County, who is nursing a broken foot.

DIVISION TWO

BY ROY D. FRANKS

Division Correspondent

VACATIONERS include *Hazel Baker*, secretary to the Office Engineer, who spent a few days visiting friends in western Virginia; *Mrs. Betty Paul*, Right of Way secretary, and *Miss Thelma Exum*, secretary to the Division Engineer, who enjoyed trips to the nation's capital. *J. L. Briley*, mechanic at the Division Shop, settled for a new Rambler station wagon while wife Lucille vacationed in Florida. The Brileys had as recent house guests, Mr. and Mrs. Bill Thomas and children of Baltimore. *Miss Annie Laurie Askew* spent a long Easter week-end visiting friends and relatives in Arlington, Va., and Washington, D. C.

BEAUFORT - PITT members of the NCSH&PEA held a meeting recently at the State Highway Garage. Guests included *Otis Banks, Sam Badgett, Ervin Dixon, Sam Beard, Layton Gunter* and *C. W. Lee.* Entertainment was furnished by Carl Abee, III, son of *Bratha Abee*, Margaret Elks, Frankie Lamm, Tommy Smith, Margaret Miller and Van Everette, all pupils of Marie's School of Dance; and by pianist Phyllis Boyd, daughter of Pitt Chapter Secretary *James Boyd.*

A SPEEDY RECOVERY is wished for *Horace Vincent*, who was injured in a fall from a National Guard truck at Cherry Point; *M. E. Garner* of the Right of Way Department, who is confined to Pitt Memorial Hospital; *D. F. Johnson*, Maintenance Supervisor for Pitt County, who recently underwent surgery at Pitt Memorial Hospital; and *H. W. Stokes*, a patient at Memorial Hospital in Chapel Hill. Welcome back, *Kelly Trip, S. V. Catlett* and *L. W. Rowe*, who have been on the sick list.

WELCOME *James Langley*, who has been promoted to Prison Supervisor for this Division. It was good to see all these visitors recently: *W. H. Rogers, Jr., J. L. Phillips, P. A. Jenns* and *R. Markham.*

SYMPATHY is extended to the family of Prison Supervisor *H. L. Harris*, who died March 21.

DIVISION THREE

BY IRENE C. HEWETT

Division Correspondent

BEST WISHES to our newly-weds: Mr. and Mrs. *Thomas D. King* were married March 12. He is an Eng. Aide II in the Construction Department at Clinton. Benjamin Thomas Dail and Martha Diane McCullen were married March 27 in Dillon, S. C. The bride is the daughter of *Evans McCullen* of the Construction Department in Clinton.

BARBECUED CHICKEN and fish were on the menu when the Sampson County Association held a dinner meeting at the Highway Shop in Clinton. Guests included *W. C. Coley* of Wilmington, Mr. and Mrs. *B. Whiteside* and *Henry T. Wooten.*

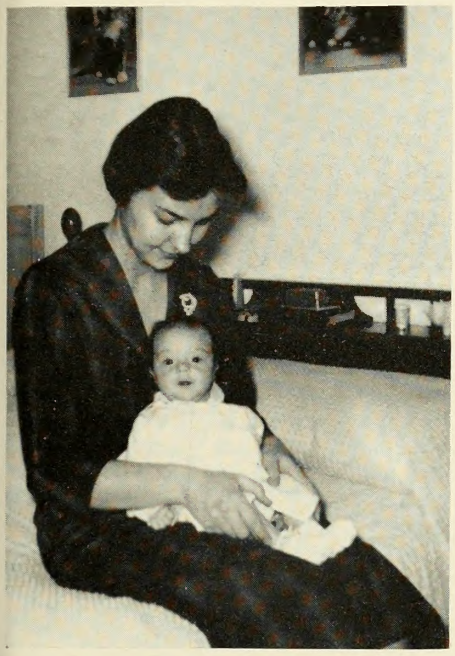
OUR LOSS is ACL's gain. *Irene Worley*, stenographer in Right of Way, and Division correspondent for ROADWAYS, has resigned to accept a position with the railroad. She and her husband and family will be moving to Jacksonville, Fla., in July when ACL moves its general offices there from Wilmington. Everyone is going to miss Irene very much. Replacing her is Mrs. Nell Straughan, mother of a son and daughter, ages 12 and 13. *Bob Trevathan* has transferred here from the Fayetteville office and he and his wife are "home hunting" in Wilmington. *Carl D. Parker, Jr.*, has transferred from Construction to Right of Way.

A SPEEDY RECOVERY is wished for *W. W. Honeycutt, D. L. Carter* and *G. S. Simmons* of Sampson Conuty, *E. E. Wells* of Duplin, *Dalbert M. Coleman* and *H. E. Hicks* of District 1 and *Lewis F. Hines* of the Wilmington Equipment Shop. It's good to have *Mrs. Marie Ferrell, Mrs.*

Charlotte Wallace, *J. D. LeGwin*, *H. H. Watkins*, *Chuck Mayer*, *R. W. Blackburn* and *A. E. Spell* back with us after illness.

SYMPATHY is extended to *D. L. Hewett*, *M. E. Hewett* and *Charles W. Sutton* who lost their fathers recently; and to the family of *J. A. McKeithan*, retired employee, who died recently.

WE KNOW *J. W. Meadows* is enjoying his vacation visiting h's son in New Orleans.



Mechanic and Mrs. J. B. Bowden of Wilmington are quite proud of their granddaughter, Loretta Dawn Byrd, born January 28. She is pictured here with her mother, Mrs. Douglas Byrd of Candor.

DIVISION FOUR

BY AUDREY L. PERRY

Division Correspondent

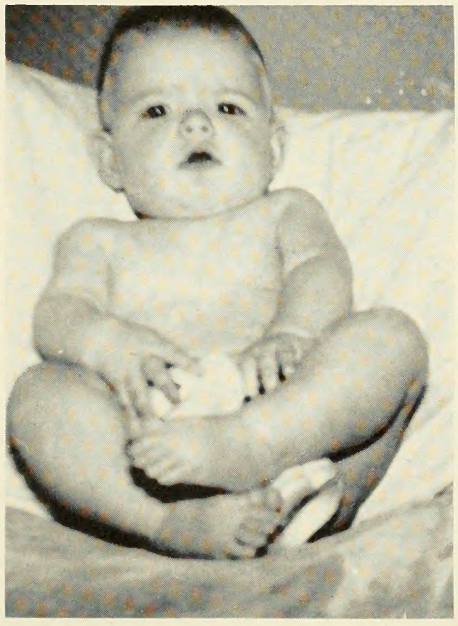
CONGRATULATIONS to the *Archie Murrays*, whose second son was born March 21st. Archie is employed with the Maintenance Department in Wilson County. Former steno. *Margie Strickland* is the proud mother of a daughter, born April 4.

GET WELL wishes are extended to Machine Operator *Kenneth Gay* and to the wife of Machine Operator *L. L. Sellers*. *F. D. Freeman* of the Equipment Department has returned to work following a heart attack and *W. L. Bunn* has returned to his duties in the Equipment Department following surgery at Veterans Hospital. *Paul Fulghum* wishes to advise all his friends that the "No Visitors" sign has been taken from his door and would love to have them visit him at his home, 312 W. Green Street. Little Donna Frances Ferguson, daughter of *A. E. Ferguson*, reportedly won the hearts of all the nurses during her 18-day stay at the hospital. She is now reported recovering nicely at her home.

RECENT TRANSFERS include *James Layton Tart*, assigned to Raleigh Right of Way, now assigned to Wilson Right of Way. He and his wife have set up housekeeping at 914 Grove Street. *Harvey R. Boyette* and family are now residing in Greensboro where he was transferred with Right of Way.

SYMPATHY is extended to the families of *J. C. Jones*, who died on January 15, and *L. H. Brady*, who died on March 21. Both had been employed by the Maintenance Department.

FLORIDA VACATIONS were enjoyed recently by the *Donald Woodards*, and daughter, who visited Orlando, Cypress Gardens and Silver Springs; and by the *L. E. Pearces*, who visited his sister at Daytona Beach and toured points of interest. District Mechanic Foreman *Frank Conner* of Weldon took a week off to rest but reports that his wife kept him pretty busy. Over the holidays, Mr. and Mrs. *T. W. Parrish* visited her mother, Mrs. R. L. Eatmon in Charlotte; the *M. D. Freeman's* visited his daughter and family in Richmond, Va.; Sign Supervisor *Wade Pridgen* and family visited relatives in Plymouth; *Mrs. Betty G. Simon* visited her family in Wilmington and *G. T. Wilkins* and his wife visited their daughter and grandsons in Richmond, Va.



This young day-dreamer is Lora Mae McLean, daughter of Mr. and Mrs. A. L. McLean of Wilmington. Lora Mae was born August 11, 1959, and her father works in Traffic Services.

WE UNDERSTAND Sign Shop Foreman *Kenneth Hill* has been kicking up his heels lately after becoming an ardent dance fan. When is your next lesson, Kenneth?

ROAD OIL forces, under *S. F. Holmes*, have begun operations in the Division, after taking on 24 temporary laborers. By the end of the season, we expect the roads to be in top condition.

WELCOME to *Gene Proctor*, hired to fill a vacancy in the Division Sign Shop.

DIVISION FIVE

BY PEGGY BRIGHT

Division Correspondent

PERSON COUNTY employees enjoyed the recent chicken stew supper. Guests included *Q. L. Sorrell*, *C. L. Edwards*, *Kirk Duncan*, *C. W. Crissman* and *Mr. Belton*.

ITS A GIRL for Truck Driver and Mrs. *E. C. Adcock* of Granville County. They have another daughter, Brenda, who is 10 years old. The cigars were enjoyed by all!

EARLY VACATIONS were enjoyed by *E. D. Beddingfield*, *E. H. Harrison*, *J. R. Johnson*, *R. L. Jones*, *L. R. Perry*, *L. L. Pipin*, *W. T Southall*, *W. P. Taylor*, *J. B. Alford*, *H. W. Beddingfield*, *R. E. Bunn*, *S. T. Holmes, Jr.*, *Elvertis Jones*, *C. B. Williams* and *G. C. Wrenn*.

SYMPATHY is extended to *V. R. Overton, Jr.*, who recently lost two uncles; *M. L. Mangum*, whose mother died, and to *G. S. Jacobs* in the death of his grandfather.

BEST WISHES to *E. B. Critcher*, who had one of his "famous" speeches recorded.

A NUMBER of our people have been out due to illness and we hope that everyone is fully recovered now. *R. L. Royster* underwent an emergency operation but is now back on the job. It was good to see Maint. Sup. *Kyle Jones* out of the hospital. Welcome back *J. H. Beddingfield*, *D. H. Bunn*, *Jessie Carlyle*, *A. G. Davis*, *R. H. Denton*, *H. C. Moody*, *W. E. Rogers*, *J. F. White*, *K. M. Wood*, *J. A. Bottom*, *C. W. Catlette*, *R. H. Johnson*, *D. A. Pearce*, *G. W. Pruitt*, *C. P. Sledge*, *J. M. Sykes*, *W. R. Wilder* and *C. B. Williams*, who have been out due

to recent illnesses. *J. C. Horton* and *T. I. Dean* have been out on extended sick leave. Others on the sick list recently include: *Kirk Duncan, L. L. Lawrence, Raymond Tippett, J. L. Davis, F. A. Aiken, R M. Ball, B. F. Holsclaw, Z. W. Holden, G. W. Martin, H. V. Moore, B. B. Summer, A. B. Wheeler, Harry L. Carden, Willie M. Cole, E. B. Critcher, E. B. Davis, W. A. Ellington, W. C. Fowler, W. B. Grady, Joe Greenway, H. E. Hicks, H. R. Hicks, F. H. Laws, Robert Mathews, A. S. May, Vencent V. Morton, W. L. Reams, H. B. Royster, W. R. Rutledge, H. S. Whitt, R. G Williams* and *P. L. Woodlief.*

DIVISION SIX

BY STEVE AMMONS

Division Correspondent

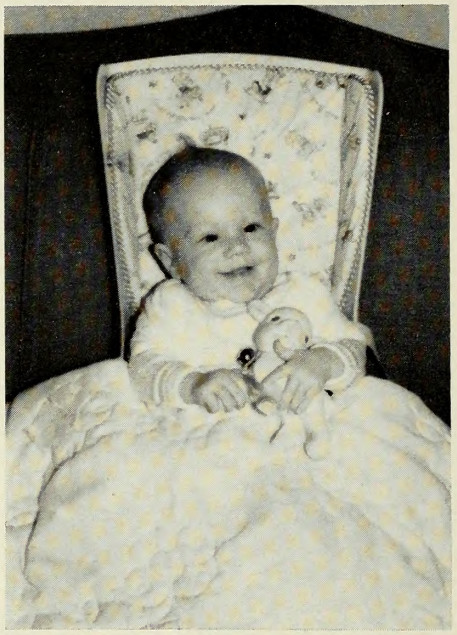
BEST WISHES for a happy retirement are extended to former Maintenance Supervisor *L. D. Hubbard.* He came with the Highway Department in 1931. The Hubbards make their home on Route 2, Fayetteville.

A VISIT with the children was enjoyed by Maintenance Foreman and Mrs. *W. P. Holland,* who spent a few days in Mississippi. District Engineer and Mrs. *S. M. Wilson* report a delightful time on their tour of the southern states.

SYMPATHY is extended to the family of *A. H. Beard,* retired employee who died recently; to Machine Operator *J. E. Jackson's* family; to the family of Maintenance Foreman *E. M. Cain.* Mr. Cain had been with the Department since 1931; to *Dewey Strickland,* whose father died recently; to the family of *Earl Collins,* Maintenance employee, who died after a short illness; to the family of retired employee *R. P. Dove,* who died in March and to *Loyd Hawkins,* who recently lost his wife.



Pictured here are the new office building and warehouse at the lumber yard in Fayetteville. J. I. Lynch of Clinton is Cumberland County Bridge Superintendent and J. B. Hatcher, Bridge Foreman, of Fayetteville, was foreman in charge of the building construction crew. These buildings were completed in February. Fayetteville Bridge Maintenance Crew is in the background.



Smiling Walter Benjamin Hatcher was four months old when this picture was taken. His father, J. M. Hatcher, recently rejoined the Construction Department at Fayetteville following discharge from the Air Force. Employed by the Bridge Maintenance Department is J. M.'s father, J. B. Hatcher, who has has completed over 30 years service with the Highway Department.

THE STORK brought a bundle of joy to the *W. H. Stones.* Their daughter arrived on April 3. "Bunk" is with an engineering party in Lumberton. Mr. and Mrs. *C. R. Roberts* are mighty proud of their first grandchild, a girl, born to Mr. and Mrs. Virgil Roberts of Salisbury.

GET WELL WISHES are extended to the following who were recently in the hospital or confined at home due to illness: *W. H. Clewis, Edmund Clewis, H. G. Thompson and A. Q. Dew's* wife.

THE AZALEA FESTIVAL was attended by *F. W. Hammond* and Mr. and Mrs. *C. R. Williams,* who were in Wilmington to visit their son Rudolph.

DIVISION SEVEN

BY P. L. WELCH

Division Correspondent

A BIG EVENT for the Construction Department was the fish stew prepared recently by *"Snooks" Martin, "Polly" Parrot* and *"Fire Bucket" Cole.* Upcoming soon is a steak supper at the residence of *Williard Perry.*

GOOD LUCK to *Wiley G. Bumgarner,* Laborer Special, working out of Rockingham Camp, Wentworth, who resigned recently to take another job; to *T. T. Frazier,* Highway Engineer II, who has resigned to take the position of City Engineer in Reidsville and to *M. B. "Bud" Madden, Jr,* who resigned from the Construction Department.

A SPEEDY RECOVERY is wished for these people: *Elsie B. Walker,* Truck Driver in Orange County, who has been a patient at Memorial Hospital in Chapel Hill and is still out sick; *Scott A. Campbell,* Alamance County Machine Operator who is out sick; *H. D. Wannamaker,* Bridge Foreman, recently hospitalized at McPherson Hospital in Durham and now back at home; to *Lonize M. Collins,* Machine Operator, working out of Rockingham Camp, a recent patient at Cone Hospital in Greensboro; and to *L. C. Potter* and *C. R. Cantrell* of the Equipment Department, who are on the sick list. Welcome back to work, *A. L. Meeler* and *Obra D. Thomas.*

UNCLE SAM'S LOSS is our gain and its good to have *Layton Gunter, Jr.,* back after a six month hitch in service. He and his wife are living in Burlington now. Welcome, also, to *Harvey R. Boyette* of Right of Way, who came from Wilson. *John S. Webster* of Madison has been employed as Clerk II in the Greensboro District Office. *Billy Forgay,* Eng. Aide II, who had been temporarily assigned to this position, returned to work in the Construction Department.

A RED CROSS Refresher Course was held recently with Garland Murray as instructor, assisted by *H. D. Jones,* Safety Director and *P. L. Welch,* Division Safety Chairman.

SYMPATHY is extended to the family of Machine Operator *Arthur D. Hicks* of the Road Oil Department, who was killed in an automobile accident recently; to the family of Machine Operator *Dan S. Sanders,* who died recently at Cone Memorial Hospital; and to *C. I. Walters,* whose aunt died recently.



The happy little boy here is Timothy "Tim" Daniel Jackson, 9-month-old son of the Dan Jacksons. Mommy Dot is a stenographer in the Graham District Office.

DIVISION EIGHT

BY VIRGINIA S. WILLIAMSON

Division Correspondent

NEW ARRIVALS include an 8½ pound boy at the home of Materials Inspector and Mrs. *W. D. Edge*. Barbara Dawn is the new member of the *James E. Haywood* family. James is employed in the Construction Department.



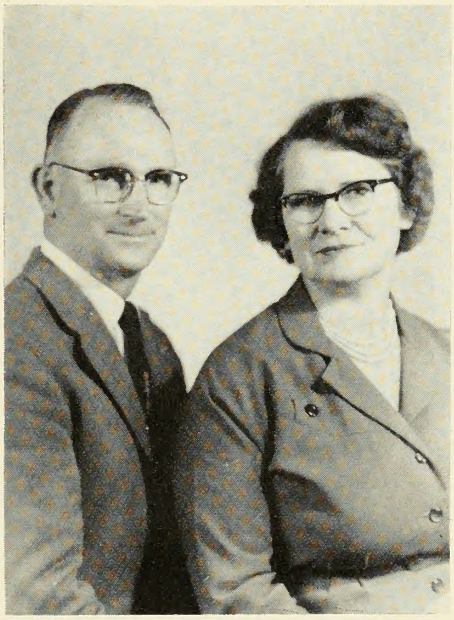
HELP FOR THE INJURED—Several Richmond County employees demonstrate what they learned at a recent Red Cross Refresher Course. Left to right: James Wilson, Cecil Parker, Carson Lathan and Garland Martin. The patient is C. E. Covington.

A TRIP to the mountains was enjoyed over the Easter holidays by the Horace Teagues. She is secretary to *S. P. Swaringen* in the District 2 office.

WE REGRET to report the death of *T. G. Everhardt*, who had been connected with the Landscape Department for the past several years. Sympathy is extended to his family, as well as to *Van C. Campbell*, Chatham County Machine Operator, whose father died recently.

MARCHING down the middle aisle soon will be Judith Webster and William Abernethy Barber of Goldston. Judith is the daughter of the *B. C. Websters* and her father is Maintenance Yard Assistant in Chatham County.

GLAD to have *D. M. Kunce* back at work and feeling much better after a recent operation.



CELEBRATE ANNIVERSARY—Mr. and Mrs. A. M. Buchanan celebrated their 24th wedding anniversary on April 12. "Buck" is a highway engineer in the Charlotte Construction Office, and is parliamentarian of the Employees Association.

A salesman rapped on a screen door beyond which an eight-year-old boy was painfully practicing on the piano.

"Sonny," called the salesman, "Is your mother home?"

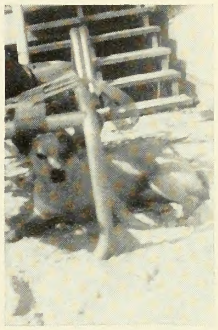
The boy gave him a dirty look. "What do you think, you dope?"

DIVISION NINE

BY R. B. FITZGERALD

Division Correspondent

A WELCOME VISITOR in the *E. L. Setzer* home was son David, home on 30 days leave from the Air Force. David has been stationed in Omaha, Nebraska, and is being transferred overseas.



A DOG'S LIFE — Frisky, pet of Edith and W. R. Carpenter, finally gave up on getting a suntan and found the only shade in Florida on a recent vacation with his family. Here, he takes it easy in the shade of a beach chair.

GET WELL wishes are extended to *M. V. Hanes, P. C. Hicks*, and *C. H. Steed, Jr.* It's good to hear that Mrs Graham, wife of mechanic *J. L. Graham* of Salisbury, is recovering after major surgery. We're happy to have these people back after illness or injury: *G. M. Barneycastle, J. R. Basinger, E. H. Brown, J. T. Christian, J. O. Ervin, R. C. Glenn, G S. Hill, E. T. Moser, W. F. Ray, W. C. Schenk, C. L. Trexler* and *T. N. Tuttle.*

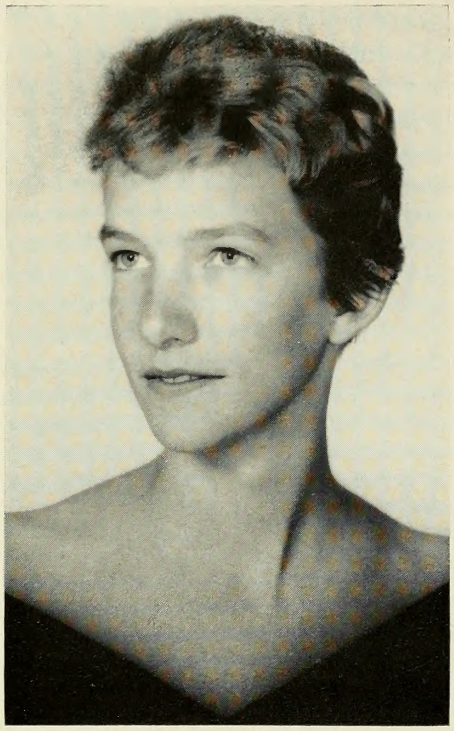
GOOD LUCK to *Don Huffman, W. E. Bacon* and *C. P. Shaw*, employees of the Right of Way Department in Winston-Salem, who are resigning soon to enter private business.

TAKING IT EASY these days is *J. M. Pegram*, who retired recently.

WE REGRET to report these deaths: R. R. McKnight, retired Prison Department employee; Lewis M Agner, who retired in 1949 after working for the Highway Department for 30 years; Sylvester P. Christian, father of *J. T. Christian;* Carl W. Huffman, father of *Don Huffman;* Phillip T. Seats, father of *J. W. Seats;* and Mrs. Alice T. Smart, mother of *Murray Roscoe Smart.*



Landscape Supervisor William G. Wilder of Division 10 is shown here with his son Mike.



Mary Katherine Redmond of Walnut Cove recently won the top State Futnre Homemakers of America award when she was awarded the State Homemakers Degree. A senior at Walnut Cove High School where she is president of the FHA, Mary Katherine is the daughter of the J. J. Redmonds. Her father is employed by the Maintenance Department in Division 9, District 2.

DIVISION TEN

BY J. W. JONES

Division Correspondent

CONGRATULATIONS to the *Linwood Hamiltons* who are the parents of twins, Linwood Jr., and Linda Louise, born on March 25.

A SPEEDY RECOVERY is wished for *P. C Austin* and *C. L. Burris*, who are on the sick list at this writing. We welcome *C. H. Faggart* and *J. H. Cranford* back to work after recent illness.

OYSTERS were enjoyed for the last time this season by men in the Equipment Department at an oyster supper on April 8. Both fried and stewed oysters were enjoyed by all.

A NEW FACE in the Equipment Department is that of *Leonard Worrel*, Parts Clerk, who transferred from the Road Oil Department to fill the vacancy due to the resignation of *J. W. Trexler*.

CONDOLENCES to the family of *R. Graham "Foots" Johnston*, who died April 13 after a long illness.

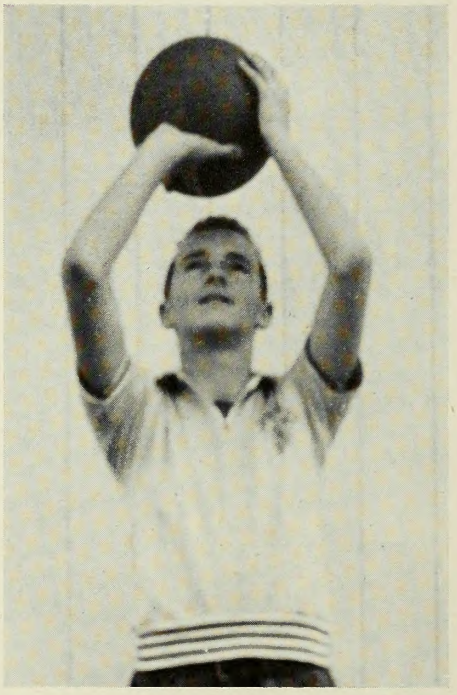
DIVISION ELEVEN

BY CORA LEE GREER

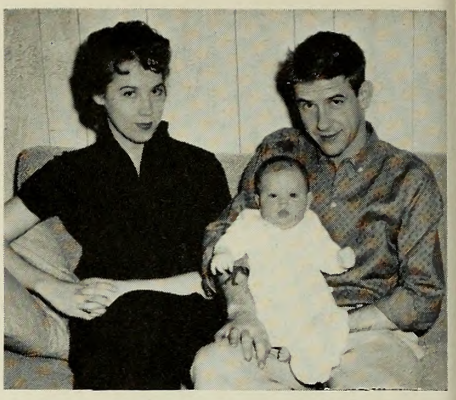
Division Correspondent

SPRING has come at last to the mountainous areas after one of the worst winters in history, with record-breaking snowfalls. Records show that we had a total of 95 inches of snow last winter in Watauga County alone. Four inches fell in in November; 1 inch in December; 8 inches in January, 26 inches in February, 54 inches in March and 2 inches in April. So it is with a great deal of pleasure that we roll out the welcome mat for sweet springtime.

RECENT VISTORS in the *J. H. Councill* home were their daughter Martha and little Bobby.



Young Eddie Finison, son of District Engineer and Mrs. E. M. Finison of Charlotte, is beginning his athletic career early. Eddie, a seventh grade student at McClintock Junior High, was the only member of his class to make the starting team on both football and basketball junior varsity teams at the school. Young Finison is an honor roll student and recently was elected treasurer of the Student Council for next year.



Mr. and Mrs. Norman S. Hodges of Norfolk, Va., are pictured here with their infant son, Norman Dawayne. Mrs. Hodges is the daughter of Distributor Driver James K. Jordan of the Road Oil Department in Division 10. She and her husband and young son are making their home in Norfolk where Mr. Hodges is stationed with the U. S. Navy.

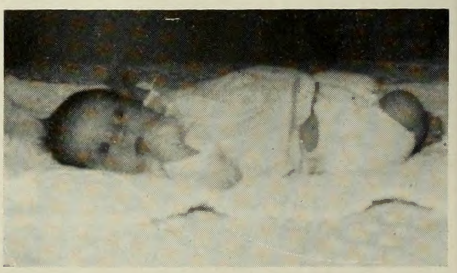
DIVISION TWELVE

BY JEAN CLINE

Division Correspondent

IT IS A FACT that Sign Department Foreman *Fred Summers'* youngest daughter came all the way from Philadelphia to help celebrate his birthday, only to find so much snow in the sunny south that he did not get home for two days and a night, having given assistance in snow removal operations.

DISTRICT II employees were saddened by the death of veteran foreman *Lawrence E. Cline*, who died suddenly while on the job in Catawba County on April 4. Sincere sympathy is extended to his family; also to Iredell County employee *C. E. Somers* in the death of his father; and to Maintenance Supervisor *W. B. Wellmon* in the death of his mother. Folks in the Twelfth were saddened by the death of *George W. Noggle*, who had been with the Department since 1931. Prior to this he



The newest member of the E. F. King family is young William Edward, born March 5th. Daddy is a Highway Engineer IV in Division 11.

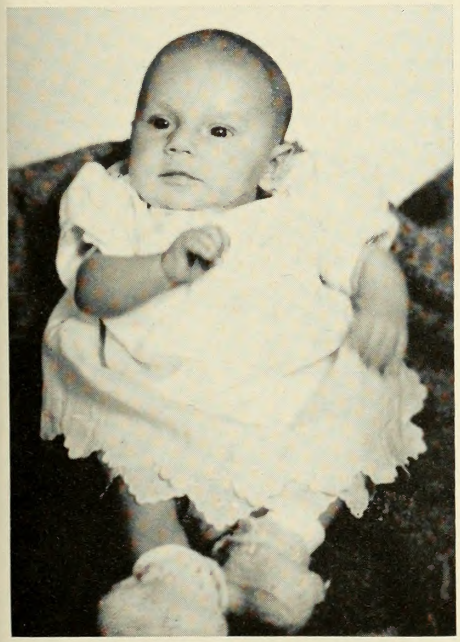
worked with the county, beginning in 1921. Our deepest sympathy is extended to his widow and family, as well as to *Ned Lewis* in the death of his mother, and to *Clyde Moore* in the loss of his mother.

WISHES for a speedy recovery go to *Andy Meade, Jr.*, and *J. H. Williams* of Cleveland County Maintenance Department, and to Mrs. *J. D. Bebber*, *P. D. Bentley's* daughter Charlene, Mrs. *A. C. Childers*, *W. L. Warren*, *H. W. Morrison*, *A. B. Morrison*, Mrs. *J. K. Jarrett*, *H. B. Rhyne's* son Michael, Mrs. *F. H. Flinchum*, Mrs. *V. B. Reavis*, *Floyd Warren's* daughter, Jimmy Reavis, son of *V. B.* Mr. and Mrs. *C. R. Rankin*, *T. H. Cranfill*, *J. H. Westmoreland* and Mrs. *Wayne Everidge*, all recently hospitalized. Cleveland County maintenance employee *G. C. Jones* is back at work after a neck injury suffered during the snow and Fred M. Harrill is back at work after being out on sick leave since October. Welcome back, *Ray R. Nichols*, who has been on sick leave.

CONGRATULATIONS to the *Ned S. Gaithers* of Iredell, on the birth of Michael Neill, on March 13 and to Mr. and Mrs. *Dan Whitesides* on the birth of a daughter, Dana Elizabeth, on March 19th.

DISTRICT ENGINEER *P. D. Miller* spent several days with his brother, former Highway employee John Miller, now retired, in Ahoskie. Foreman *John Bradburn* of Troutman reports another good trip which he and his wife took to visit relatives in Maryland recently. We were glad to have a recent card from P. L. Cantrell, who is now retired.

BEST WISHES to *D. L. Cash* of the Construction Department, who was married in April to Winburn Greene.



"So your road isn't coming my way?" This pretty young lady is the daughter of Mr. and Mrs. E. G. King. Kathy Diane was born February 24 and her daddy is in the Road Oil Department in Division 12.



THE YOUNGEST KEMPER—Presenting Barry Kemper, who recently celebrated his first birthday. His grandparents, Division Eng. and Mrs. E. L. Kemper, recently returned from a trip to Wichita, Kansas, where they visited with Barry and his parents, Dick and Sharon Kemper. Dick works as an engineering test pilot for the Cessna Aircraft Corporation.

DIVISION THIRTEEN

BY DAN TURNER

Division Correspondent

SINCERE SYMPATHY is extended to Division Engineer *W. M. Corkill* in the recent death of his mother, Mrs. W. A. Corkill, at her home in Chester, S. C.

BACK ON THE JOB, with the aid of a walking cast is *H. D. Aiken*, Maintenance Supervisor, who suffered a broken ankle in a fall during the snow. *Claud Rolland Peek*, Madison County Maintenance Foreman, was struck by a passing car while working a road gang near Marshall recently. He suffered a broken leg and will be away from work for several months. *James W. Moss*, Madison County Machine Operator, is back in the hospital again, and *Paul C. Revis* of Buncombe County, who was injured in November and has been on the sick list since that time, will re-enter the hospital for more surgery. Welcome back, *Mack Gouge*, Mitchell County Maintenance Foreman, who has returned to work after an illness of five months.

BEST WISHES for a happy retirement to *Claud W. Brown*, *Edgar F. Hunter* and *Jeter E. McDowell*, who have retired recently.



Area Foreman J. B. Murdock of Iredell County is mighty proud of his granddaughter, Joyce Carroll Murdock, who has been selected as the 1960 Miss Hi Miss by members of the senior class of Troutman High School. She will be honored in the special Miss Hi Miss edition of the Winthrop College student newspaper. Miss Murdock, who was selected on the basis of scholarship, character, leadership and attractiveness, plans to major in physical education at college. She is the daughter of the J. O. Murdocks of Troutman.



Donna Kimberly is the daughter of the Charles Goforths. "Kim" was born October 18, 1959, and her dad is employed by the Sign Department in Division 12.

DIVISION FOURTEEN

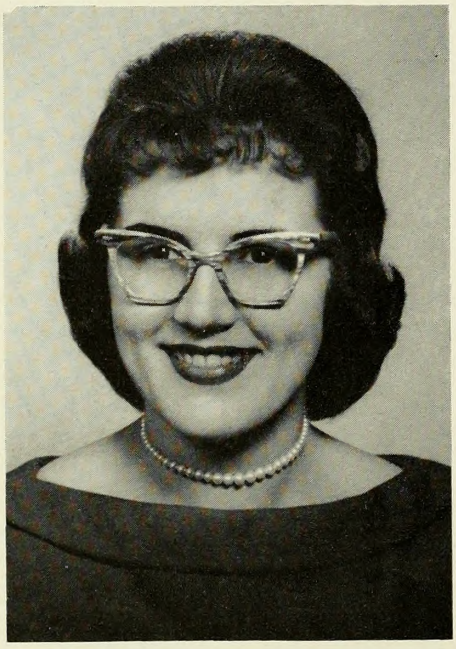
BY D. V. RAXTER

Division Correspondent

NEW ADDITIONS to our families include a daughter, born March 11, to the *Ralph Stirewalts* (Equipment Department) and a daughter, born February 22, to the *James Wrights*. Papa Wright is a truck driver with the Maintenance Department.

A SPEEDY RECOVERY is wished for *Mrs. Estelle F. Strider*, stenographer in District I, who recently underwent surgery; and Mrs. Maxine Smiley, wife of Highway Engineer *Earl Smiley*, who has been on the sick list. Its good to see young Jimmy Blevins out again. Jimmy, son of Highway Engineer and Mrs. *Jack Blevins* of Bryson City, was a patient at Memorial Mission Hospital in Asheville for several days.

RECENT GUESTS of District Engineer and Mrs. *E. L. Curtis* of Bryson City were her brothers, Richard and Hilliard Lee Revis of California. While here, they visited with Joseph and Reynolds Revis of Weaverville.



Lana Jo Byrd, daughter of Maintenance Foreman and Mrs. J. Marvin Byrd of Albemarle, will become the bride of Fred H. Misenheimer, Jr., son of Mr. and Mrs. Fred Misenheimer of Richfield on June 18 at St. Martin's Lutheran Church. Lana Jo is a student at Lenoir Rhyne College and her fiancee is employed by American Airlines in Chicago.

Resolution, Letter Commend Employees For Snow Removal

Meeting in Raleigh on April 1st., the Highway Commission passed the following resolution commending employees on their snow removal work during February and March:

'WHEREAS, one of the severest winters in North Carolina history struck the State in the months of February and March 1960, bringing unprecedented snow accumulation in some areas; and

"WHEREAS, the snow storms occurred with such frequency and in such sequence as to necessitate almost continous snow removal in some areas for periods of up to seven weeks; and

"WHEREAS, Highway employees of practically all job classifications were needed for almost around - the - clock operations; and

"WHEREAS, the splendid performance by employees in snow clearng work resulted in restoring vital transportation arteries to earliest possible use by the public; and

"WHEREAS, there were innumerable incidents in which highway equipment and personnel were instrumental in delivering food and removing the ill to hospitals;

"THEREFORE, BE IT RESOLVED by the North Carolina State Highway Commission in public session in Raleigh on April 1, 1960 that the sincerest appreciation and commendations for a job well done be extended to all employees in all areas of North Carolina;

"BE IT FURTHER RESOLVED that the examples of vital public service rendered by employees working under the most difficult of weather conditions is, in the opinion of the State Highway Commission, most exemplary, bringing to the Department and the Commission an even better reputation for public service.

"BE IT FURTHER RESOLVED that the text of this resolution be published in the Highway 'employees' magazine, ROADWAYS, and that it be spread upon the minutes of the Highway Commission meeting of April 1, 1960".

ROADWAYS is pleased to reprint a letter from rural carriers of the Sanford Post Office and Jonesboro Heights Station, addressed to James L. Stewart, Maintenance Supervisor in Sanford:

"We, the Rural Carriers of Sanford Post Office and Jonesboro Heights Station, wish to take this opportunity to express our appreciation to you and your maintenance crews for your very fine cooperation in maintaining approaches to rural mail boxes.

"We are particularly impressed by, and grateful for, the very excellent job your crews have accomplished in the removal of snow from the roads this winter. It was noted that, where it was possible, your machine operators cleared snow from the road shoulders as close to the mail boxes as conditions would permit.

"This makes our job of delivering the mail during inclement weather so much easier, and encourages our patrons to do a little extra work with the shovel to make it possible for us to serve the boxes from our cars.

"With kindest regards to you and each member of your staff, thanks again for your splendid service this winter."

The letter is signed by Harold S. Williamson, Ralph H. Fields, Gilbert L. Winders, Frank M. Conder, Roy S. Spivey, H. A. Stewart, Jack McNeill and W. Clay Farrell.

Concrete Technician Certificates Given

Concrete Technician Certificates were presented recently to 11 Highway Department employees. They are: E. H. C. Wozelka, E. S. Lewellyn, J. M. Wheeler, J. E. Davis, Asier Simmons, A. R. Thompson, Charlie Wheeler, Jr., W. K. Walker, E. R. Batten, W. B. Smook and R. B. Rumfelt.

The certificates, signed by Director W. F. Babcock, Chief Engineer C. W. Lee and State Materials Engineer J. E. Thompson, were presented to each for having given "satisfactory evidence of his understanding of certain basic principles pertaining to portland cement concrete and having demonstrated his ability to supervise and control the manufacture of concrete to meet the requirements of the Standard Specifications of the State Highway Commission."

Snow Damage Is Set At $5,000,000 In Three Divisions

Division Engineers from three western divisions reviewed snow damages in excess of $5,000,000 with the Commission at its April meeting in Raleigh.

Division Engineer J. H. Councill of North Wilkesboro estimated road damage from snow in his area at two and one-half million dollars, while Division Engineers W. M. Corkill of Asheville and Frank Hutchison of Sylva placed total losses in their areas at one and one-half million dollars each.

Worst hit were Ashe, Alleghany, Avery and Watauga Counties, where more than 200 pieces of equipment were rushed to clear the roads. Equipment rental from other highway divisions and private contractors amounted to $374,-528 for an 8-county area of tne northwest comprising Division 11.

Division Engineer Corkill said US 70, from Old Fort to Ridgecrest, is in bad condition and will need resurfacing to restore it to its pre-storm condition. Another of the major routes which is in bad shape due to snows is US 441.

Director Babcock said the average employee has earned from 8 to 13 days of compensatory time off, but the biggest job, he added, is still ahead of the Department in trying to get roads back to their condition prior to the snowstorms.

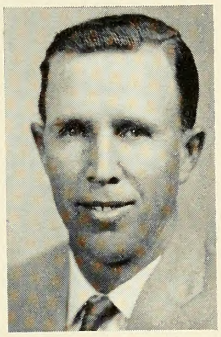
As a result of the weather, load limit restrictions had to be placed on a number of roads throughout the State, including these routes in Div. 14: NC 60, NC 294, NC 69, NC 28, NC 281, NC 280, NC 191 and US 64.

A Beatnick was driving his car quite unaware of his surroundings except that he was convinced everyone was "way out," when suddenly, he wrapped his car around a big tree. The impact was so great that he was thrown out, severely bruised and battered. Another Beatnick happened to come along and seeing the injured man and hearing him moan, asked if he could help. The victim stirred, murmuring, "Call me an ambulance. Call me an ambulance," so the 2nd Beatnick shrugged and said, "Hi Ambulance," and passed on his crazy way.

450,000 Miles Without An Accident

Division Four Truck Driver Honored For 10—Year Safe Driving Record

Congratulations to Truck Driver Charles P. Taylor of Kinston, who has been named recipient of an "Oscar" as North Carolina "Driver of the Month."



Taylor

Taylor is one of 12 professional truck drivers to be named for outstanding driving records last year. He will receive the beautiful trophy approved and authorized as a monthly safety award by the Safety & Personnel Council of the North Carolina Motor Carriers Association.

Presentation of the award will be made at the Highway Commission meeting in Raleigh on May 26th., by Luther C. Cromartie, President of the North Carolina Motor Carriers Association.

One of the judges commended Taylor, winner of the March trophy, for driving over 10 years and 450,000 miles without an accident of any kind.

Judges were: Col. David T. Lambert, Commanding Officer of the State Highway Patrol; H. S. Baucom, safety director for the North Carolina Industrial Commission; and Don Coordes, Traffic Department Rate Specialist for the North Carolina Utilities Commission.

Highway employees offer their congratulations to Taylor for his excellent safety record over the past decade.

Improvement Plans Gain Approval At Series Of Public Hearings

The months of April and May have seen the Highway Commission holding a number of public hearings at which time plans were revealed for several major Primary and Interstate road improvements to be designed this summer for letting in the fall or winter.

One concerned the Interstate 40 connection between Kernersville and the East-West Expressway in Winston-Salem and county officials of Forsyth and Guilford, along with the general public, approved the proposals at the April 15th hearing.

On April 13, there was unanimous support in Carteret County at the hearing on improvements to US 70 west of Morehead City and the same was true on US 74, where the Laurinburg By-pass is planned for letting next year.

One of the largest and most important hearings was held at Statesville on the proposal to build a portion of Interstate Route 77 between Statesville and Mooresville. This will become the first contract letting on the Charlotte to Canton, Ohio route.

On May 4, citizens of High Point got a look-see at plans to widen South Main Street in High Point, while Greensboro was the site for a hearing on right-of-way purchases to improve a portion of NC 6 from Lee Street to Interstate 95.

Wentworth was the scene of a May 9 hearing on the proposal to rebuild and relocate US 220, from Stoneville to Price and eastern North Carolinians crowded the Lenoir County Courthouse at Kinston for a hearing on right of way purchases to improve NC 11 from Kinston to Grifton.

These hearings were held to give citizens and local officials an opportunity to register their approval or objections to the plans. Hearing officials report widespread acceptance in these recent public meetings.

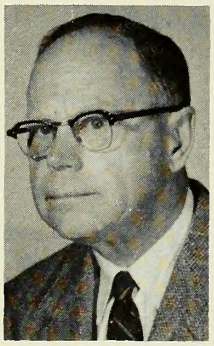
If all the cars in the United States were placed end to end, some fool would try to pass them.

Council Named Area Maintenance Engineer

Doughton, Koonce, Bradshaw Move Up

James H. Councill of Boone has taken over the duties of Area Maintenance Engineer for the western part of the State. James E. Doughton has moved into the post of Eleventh Division Engineer left vacant by Councill's appointment.

In his new job, Councill will travel throughout the western highway divisions, and will head highway maintenance in the mountainous areas. Doughton served as Councill's assistant in Division 11 since 1953.

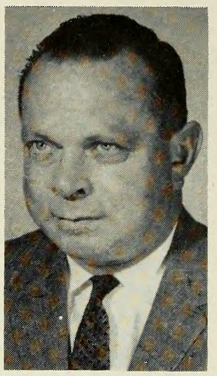


Councill

The new Area Maintenance Engineer is well qualified for the post, having worked with the Department in mountainous areas of the State since 1920, when he joined the department as instrumentman. He later served as Resident Engineer at Asheville and Sylva, District Engineer at Boone, Assistant Division Engineer at North Wilkesboro and was elevated to Division Engineer there in 1953.

A native of Boone, Councill attended the public schools there and the University of North Carolina. He is active in the Boone Methodist Church where he serves on the Board of Stewards, and is a past president of the Boone Lions Club. He is a member of the N.C. Society of Engineers and is Watauga County chairman of the Morehead Scholarship Committee. He is married to the former Margaret Hooker Moore, and they have a son and a daughter.

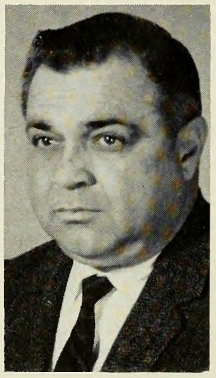
Director W. F. Babcock said he is "pleased to have available within department ranks, someone of Mr. Councill's ability, who is familiar with maintenance problems in this section of our State, which has suffered severe road damage in two of the last three hard winters."



Doughton

Doughton is a native of Sparta and received his education in the public schools there, later attending the University of North Carolina and Berea College in Kentucky.

He joined the Department in 1934, and has served as rodman, instrumentman, Resident Engineer, District Engineer and Assistant Division Engieer. A verteran of World War II, Doughton served in the Navy Seabees, and was in charge of harbor surveys, airports and general maintenance work for the base at Palermo, Sicily, and was assistant to the public works officer at Oran, Algeria, He is a member of the official board of the First Methodist Church of North Wilkesboro. Married to the former Grady Sue Spicer, he has one daughter.



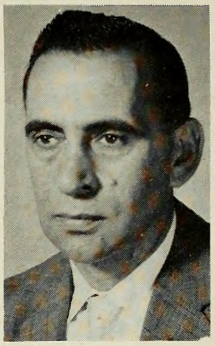
Koontz

Howard E. Koontz, District Engineer of District I in the 11th Division, succeeds Doughton as Assistant Division Engineer.

Koontz is a veteran of more than 25 years with the Department, having begun his highway career in 1934 as a truck driver with the Road Oil Department. He has served as junior and senior highway inspectors, Highway Inspector II, Road Maintenance Supervisor, Road Oil Supervisor and District Engineer.

A Winston-Salem native, Koontz was educated at Welcome High School, Guilford College and Applachian State Teachers College. He is a member of the First Methodist Church in Elkin and is a director of the Elkin Lions Club. He is married to the former Mildred Hill and they have one son.

Scientists tell us we're taller in the morning than we are in the evening. Most of us have noticed, too, that we're shorter around the end of the month.



Bradshaw

Resident Engineer Ralph M. Bradshaw moved into the District Engineer's post, replacing Koontz, with headquarters at Elkin. A native of Caldwell County, he joined the Highway Department following his discharge from service in 1945. He has served as rodman, instrumentman and Resident Engineer on construction in Surry, Yadkin and Wilkes Counties. He is an active member of Elkin Valley Baptist Church and also holds membership in the Elkin Lions Club. He is married to the former Margaret Justice and they have two sons.

SECONDARY—

(Continued from page 3)

also have the money to keep up the road (support a $800 per mile maintenance cost as opposed to a $400 per mile maintenance cost).

Let me give you an example. In 1949 North Carolina approved a 200 million dollar secondary bond issue and provided retirement of those bonds with a 1¢ per gallon additional State gasoline tax. Now, a decade later, we have a bonded indebtedness of $130,000,000. We have paid off $70,000,000 and we are paying it off at the rate of approximately $12,500,000 annually. That bond issue will be retired a decade from now. But the $12,500,000 is not the only expense we have on those paved miles. We must maintain them and this additional cost approximates $10,000,000 per year. The total cost per year then is close to $22,500,000.

Giant forward steps in building roads have been taken, great needs remain. Few services of State Government are more important, and I can tell you quite frankly that none demands a greater degree of efficiency and thoughful cooperation among officials, State and local, or a greater degree of public participation and understanding. Above all as public servants, entrusted with millions of your tax dollars, we must keep our feet on the ground and we must constantly strive to keep our sights set on total Statewide road needs as opposed to philosphies which would tend to sectionalize our people or set one group against another. One State Highway

Commission with one goal is better than 14 Highway Commissions with 14 goals.

It makes no real difference if there are seven Commissions or nine or eleven, so long as they are not given one section and so long as public tax dollars are not turned over to them for expenditure. There is no area of highway work where this is more important than it is on the vast secondary road network of our State.

Sometimes it takes a good deal of courage to tell a road delegation that we are sorry—but there are several other roads that have more houses, school bus trips, or everyday traffic, but on the other hand, we would be pretty sorry Highway officials if we didn't have a consistent method of measuring road needs throughout the State— one that is under constant review for any possible improvement—and one that is available to any citizen who would like to review it.

We believe strongly in the kind of representative Highway Government that counsels frequently with local officials and local people. For this reason we have gathered road requests from all segments of our population in 33 Commission public hearings which have been held in all areas of North Carolina, virtually from the Tennessee Line to the Atlantic Ocean and from South Carolina to Virginia. We are deeply appreciative to all the people who have shown their interest by attending. Hundreds of them have seen their requests turned into construction projects and completed as our Commissions has carried on in the past three years the greatest Statewide highway building program in North Carolina.

The future is bright if we have the courage of our convictions. There are among us those who would tear our program apart without first finding out what has been done and why. To all the people of North Carolina I would say the accomplishments' procedures, the plans, the needs and the stewardship we are giving to our positions of trust are on open book.

I have covered only one segment of highway work, that which deals with secondary roads. I believe that I should tell you that several other States have expressed a keen interest in the current highway program in North Carolina. Several have sent representatives to study our administration with an eye towards revising their own in accordance with it.

We are proud of what has been done, what is being accomplished, and what can be done in future years with thoughtful, rational, and responsive planing, meeting challenges head on without sectional, individual, or group partiality.

Commission Gets Editorial Support From Leading Papers

Considerable editorial support of the Highway Commission has been voiced recently by some of the State's leading newspapers.

ROADWAYS is pleased to reprint portions of these editorials below.

THE CHARLOTTE NEWS—"Nothing testifies more eloquently to the shortage of issues in the 1960 gubernatorial campaign than the number and character of attacks leveled at North Carolina's 1957 highway commission reform.

"Open season has apparently been declared and several candidates and their supporters have already taken their swing at a system that just happens to be superbly right for the state.

"Naturally, there has been some grumbling during the past three years. But much of it comes from the remnants of various little political machines wrecked by the reform.

"What is being proposed, generally, is that the present "statewide" highway commission be replaced by a much larger body made up of representatives of various geographical areas. It has also been proposed that individual commissioners be vested with broad authority over secondary road matters.

"If accomplished, this would represent a step backward in the direction of the same discredited system that was abandoned in 1957.

"Thanks to the efforts of Gov. Luther H. Hodges, an excellent study commission headed by Sen. Claude Currie of Durham and the wisdom of the 1957 General Assembly, North Carolina now has a highway administration of which it can be justly proud. Its very compactness (seven members) guards against the kind of political baronies which once supervised the state's road-building chores. It provides a more unified operation throughout the state and it builds roads according to statewide needs rather than the private whims of some local political boss. This assures adequate long-range development of a highway system to meet the growing needs of the motor age.

"It is a matter of public record that, under the old system of geographical divisions, the local commissioner had more authority than was good for him —or the state. Highway operations often differed from division to division. Some commissioners simply used their peculiar power as a political weapon. As a result, the real needs of the people often went begging while special interests were served.

"The critics of the present system would argue that they do not intend to go all the way back to the bad old days —just part of the way. We would maintain that any step backward is unwise and unjustified by the facts.

"Let North Carolina's roads and highways be built solely and impartially on the basis of needs and traffic rather than on the basis of political favoritism and sectional pressure."

THE SHELBY DAILY STAR — "Sometimes it takes a long, long time to get the word around to everybody.

"Such has been the case concerning policies and procedures of the State Highway Commission as regards secondary roads.

"With the reorganization of the road department three years ago, a state rating system for secondary roads was initiated and other procedures begun which, for all practical purposes, eliminated the old "petition and holler" system that had been common previously.

"At the same time a story was circulated in most newspapers to the effect that the new program would include new methods of giving county commissions full information on county road plans and would seek the cooperation of these boards in implementing the secondary roads program.

"That word 'cooperation,' innocently included, has given rise to widespread misunderstanding among the citizens and has led to the idea that county boards are in position to schedule roads for acceptance and improvement by the highway department.

"This is not the case. County commissioners have no mbore influence over the secondary road program than the state legislature has over the federal road program. Paving and improvement are based upon need compared to other secondary roads.

"In other words, the state highway department keeps county commissioners informed of how road are rated for improvements, what improvements are planned and when they are completed, and informs commissioners of changes in policies and procedures that may relate to county roads.

"Beyond that, county commissioners have nothing to say about secondary roads. The petitions that stream through the board meetings are merely taken under advisement and passed on to the highway department.

"State highway officials have commented many times that petitions are not the deciding factors in the road program. All roads in the county are rated under an equitable point system and are scheduled for improvements accordingly.

It seems to us that continuation of the petitions system is useless. It gives the citizens the idea that their county board has the key role in secondary road planning. It creates an unfair impression and unnecessary pressures upon county commissioners.

"Perhaps, through a full discussion of the secondary road program during the current gubernatorial campaign, the citizens will gain a clear idea of how their state-wide planning system works. It should be made clear that county commissioners are not the ones to harass for action.

"Of course, by the time this happens, a new governor might step in and shuffle the cards again. But we hope the long range, business-like approach to road improvements is not overturned.

THE KINSTON FREE PRESS—"We can't agree with our friend John Larkins, nor one of his opponents, Terry Sanford, candidates for Governor, that we need district highway commissioners. We are still of the opinion that a State Highway Commission rather than one made up of district representatives is better. It assures an overall program more in keeping with the needs of the State at large.

"In this connection it will be recalled that the first Highway Commission whichblazed the way and set the pace not only in North Carolina but for all the states of the Union in highway construction, was composed of three commissioners, one of whom was the late John Cameron of Lenoir County.

"Of course having a district commissioner who will put the needs and desires of the district first in his program appeals, but from the broader standpoint, a State Commission is more desirable and more capable of producing a worthwhile state system of roads."

THE CHARLOTTE OBSERVER — "Just a few years ago a North Carolina highway commissioner was about the closest thing to a king that these parts have known since the Revolution.

"He had a division, which he quite naturally called "my division" and he was lord proprietor of its roads and often its prisons too.

"He was usually a first rate fellow, and the quality of the highway system reflects the fact. But too many of his decisions on the paving of secondary roads did not follow the white line down the middle. They were decisions based upon favoritism, upon the influence or politics of the petitioner.

" 'I can show you a road that not only goes off to the single farm of one man, but actually circles his barn,' a Highway Commission employee says now.

" 'In the mountains, I can show you a paved road going to the summer home of a man. Parallel to that road is an unpaved school bus route.'

The Hodges administration has tried to put an end to this sort of thing. Its highway commissioners are not 'division' men; they are supposed to represent the entire state. Secondary road paving is not decided arbitrarily by a division mogul holding a political appointment. It is decided by criteria that have been carefully chosen and publicly displayed.

Secondary roads are now a big issue in the campaign.

All the candidates for governor agree that the Highway Commission should be enlarged (from the present seven members) to give the people more chance to express their views.

Two candidates go much farther. Terry Sanford and I. Beverly Lake would return to the old system and allow division commissioners to make the key decisions. John Larkins Jr., and Malcolm Seawell would not.

"There has been much talk about the 'human element' in rural road affairs. It has been said that roads cannot be fed out of a 'Univac machine'—cold, calculating, impersonal. It has been charged that the people have no one to talk with, that the Highway Commission is estranged from the population.

"Maybe we are estranged too, but we have not heard much of this screaming that supposedly has been going on. And if there have been loud screams, maybe some of them have come from people who want roads but do not deserve them by any realistic measurement of need. It is all right to talk about the 'human element', but this can mean the fellow who yells the loudest or who works for the right man in the campaign.

"Exactly how are secondary road matters handled now? Jay Jenkins provides this answer from Raleigh:

" 'After numerous consultations with county commissioners, the new Highway Commission decided to set up a yardstick by which secondary road needs could be measured. It came up with the point system, under which points are assigned—so many for a church, a house, an industry.

" 'On the basis of points, priorities were assigned for every secondary road in the state with a traffic count of 50 or vehicles per day. Some 9,500 miles of roads in this category were unpaved in 1957, and 5,000 secondary road bridges were sub-standard.

" 'copies of the rating sheets for all the roads in each of the 100 counties go to all 100 county courthouses, where they are open to public inspection.

" 'Any citizen may go to his courthouse and see the priority of his road, its number of points. And he may compare his road with that of his neighbor.

" 'As improvements are made, other roads move up in the priority list. Each two years new rating sheets reflecting changed conditions are drafted and sent to the courthouses.

" 'Under the old system, lump sums were allocated to each division and county work was based on area, population and mileage. Under the new system, this money is distributed on the basis of measured, documented need. The mileage of unpaved roads in each of the 100 counties was compiled, and need determined on a percentage basis.

" 'In New Hanover County, for example, it was found that there were only 22 miles of unpaved roads . . . But in Wilkes there were 952 miles. New Hanover's share of improvement funds

was $9,500; Wilkes' was more than $600,000 because of the needs formula.'

"Perhaps more highway commissioners are needed to explain these criteria to people whose roads hold low priority. That is one thing, but to return to the old system is quite another. It would be a step beckward.

"The emphasis is now upon relative merit as determined by professionals. Even if it is not fully understood, it is much better than reopening the door to favoritism, friendship, influence and politics."

Charlotte Throughfare Plan Gains Approval

The massive, new, long - range thoroughfare plan for the City of Charlotte was revealed to citizens of the Queen City last month. Designed for the Highway Commission and the city by the consulting firm of Wilbur Smith and Associates, the long-range plan recommends construction of several new major expressways and street improvements over the next 20 years. Cost of the program is estimated at $63,513,000.

The State Highway Commission and the U. S. Bureau of Public Roads participated in cost of the thoroughfare plan to the extent of 75%, while the City of Charlotte paid 25% of the tab.

Unquestionably, the Smith study of Charlotte street and road needs is the most comprehensive ever developed for any municipality in North Carolina. In explaining the study, Smith said, "Charlotte's growth and promising potential demand a master highway transportation system that is capable not only of satisfying immediate and long-range traffic needs, but also actually stimulating the area's overall development."

Most costly of the recommended improvements would be a North-South Expressway, extending from Interstate Route 85 through the central area of the city to a point near the North Carolina-South Carolina State line just west of Pineville. The 9.3 mile expressway would cost an estimated $20,217,000.

Second of the recommendations is for the modernization of Independence and Wilkinson Boulevards, converting them to partial or full expressway standards. Smith called for 12 miles of partial expressway and 3.4 miles of full expressway, and one new section in the vicinity of Sugar Creek. The Independence Boulevard project would cost $10,000,000.

A Northwest Expressway would extend from Independence Boulevard to Interstate Route 85, at a cost of $9,-147,000 for the 3.9 mile link.

Seven other recommendations for less costly street improvements would total $24,201,000 and would involve major route improvements totaling 284 miles of Charlotte streets. Highway Director Babcock keynoted the presentation of the thoroughfare plan at a meeting attended by some 150 leading citizens of Charlotte on April 15. Mr. Babcock pointed out that the Highway Commission was pleased to participate in the thoroughfare planning for Charlotte, stating that our Commission is presently working on some 40 major thoroughfare plans for other cities in North Carolina. Most of these are being designed by the Commission's own Advance Planning Department. In the case of larger cities, such as Charlotte, Winston-Salem, and Greensboro, private consultants have been called in. A beautifully detailed 180 page study outlines the growth potential of Charlotte, present and future travel desire lines, recommendations for one-way street systems, and detail location studies for street improvements.

Smith's report states that, "Charlotte, like most metropolitan areas, has grown at a faster pace than its ability to provide adequate transportation facilities. 1958 population figures for Mecklenburg showed 268,000 permanent residents. By 1980, this figure is expected to swell to over 400,000. Studies show that Charlotte has one car for every 3.3 persons, and 61,800 vehicles are registered within the urban area at the present time. By 1980 this should grow to 130,000 vehicles.

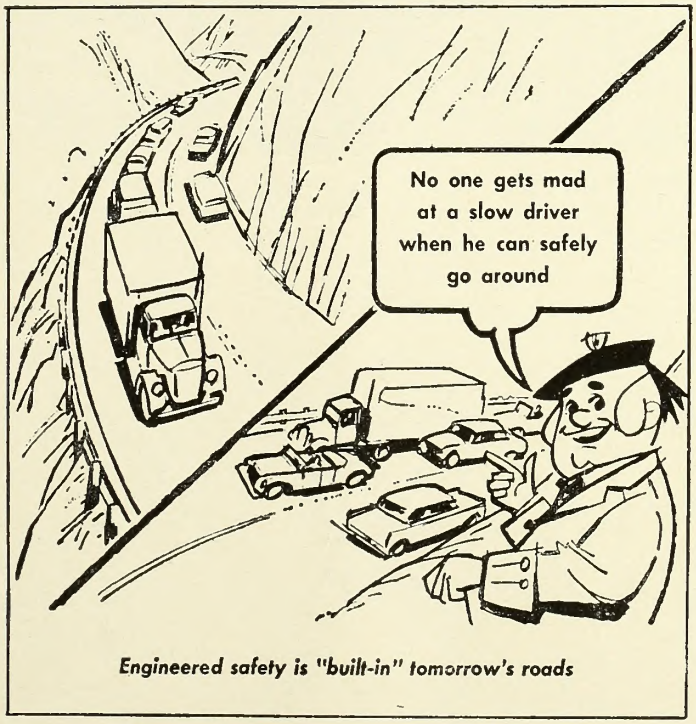
In his talk to civic, business and governmental leaders of Charlotte, Director Babcock said the thoroughfare plan is a mile-stone in the progressive development of the State's largest city. He pointed out the greatly increased effort being made in recent months for such cooperative thoroughfare plans, with the State, city and Bureau of Public Roads joining in study costs and coordinating municipal and State street and highway planning on an efficient and effective long-range program for improvements.

Less than two weeks after the presentation of the plan to the City Council, the Charlotte municipal body adopted it unanimously. In the near future, the plan will be submitted officially to the State Highway Commission for discussion and mutual adoption.

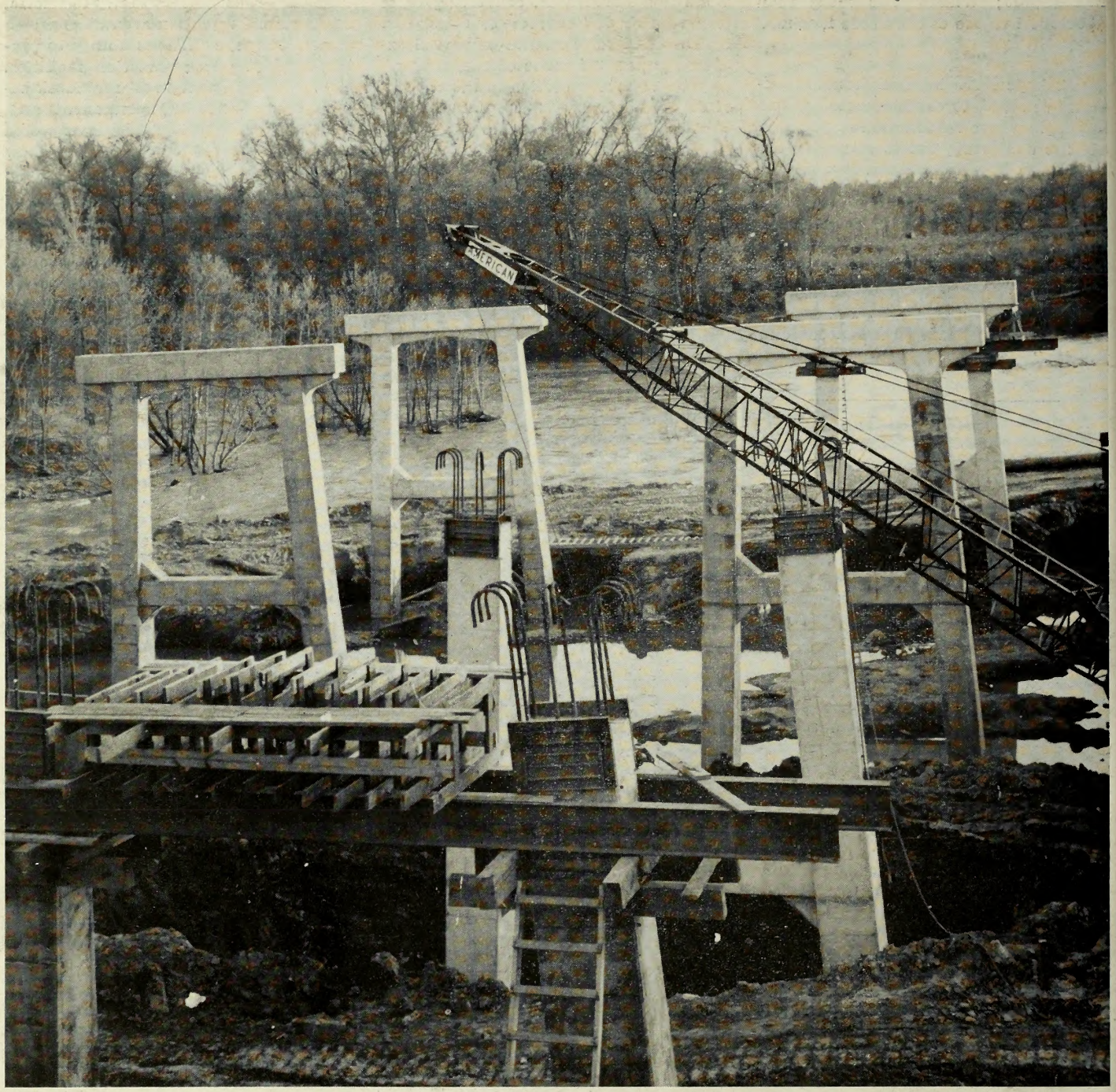
Prior to completion of the Smith report, the consulting firm conferred frequently with members of the Highway Department's planning staff.

"CONNIE" MacAdam

by Mark Blake



Engineered safety is "built-in" tomorrow's roads

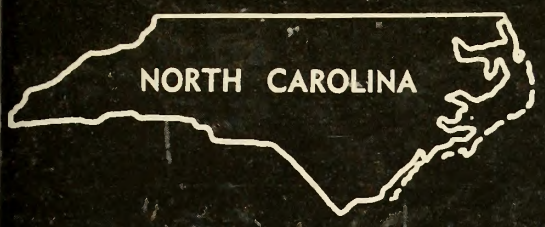


Work is underway now on this bridge near Roanoke Rapids which will be a part of Interstate Route 95. Length of the project is 1.88 miles. Contractor for the structure is J. Lawson Jones of Clarksville, Va., and cost of the bridge is $1,047,655.65. Sikes Brothers of Wadesboro has the contract for approaches to the bridge, at an estimated cost of $207,376.80.

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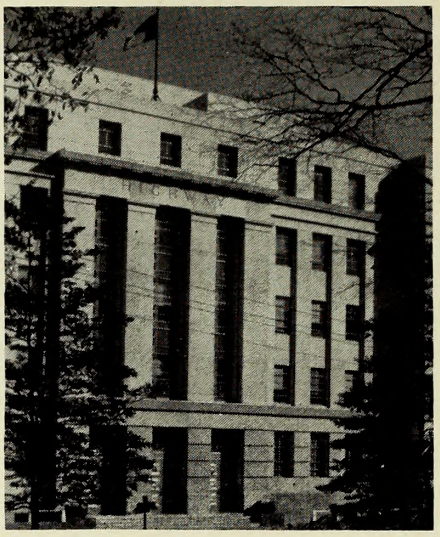
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Luther H. Hodges.....Governor
J. Melville Broughton, Jr.....Chairman
Robert Bunnelle . . . James W. Mason
Fletcher H. Gregory, Jr. . . . R. T. Morris
Ralph L. Howland . . . . . J. Lee White
W. F. Babcock.....Director of Highways

JULY-AUGUST
Sam Beard.....Editor
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Radar-Type Device Aids Survey Parties

The rod and chains, tools of the surveyor since the days of George Washington, are still very much in use today, but a new radar-type device called the Tellurometer now reduces the many miles that a surveyor must travel in taking measurements.

Highway surveyors in North Carolina are busy at the present time, acquainting themselves with the latest-model measuring device just arrived from its South African manufacturer.

A Tellurometer system consists of a master and remote unit, each powered by an ordinary 6-volt automobile battery. Built in is a radio telephone, providing static-free communication between the two units during measurements. Each unit is set upon a tripod and plumbed over the station mark in a manner similar to a transit. The master unit sends out a continuous radio carrier wave, which is picked up by the remote unit and re-broadcast to the master. The time it takes the waves to reach the remote receiver and return is measured in micro-milleseconds, and then in turn translated into miles, feet and inches.

Distances from 1 to 100 miles can be measured on the Tellurometer, within 2 inches of accuracy. Recently, the Tellurometer was used to measure the distance across the Alligator River for the proposed bridge. The distance, 2¾ miles, as measured on the Tellurometer, came within less than 1/10 foot of the calculated distance arrived at by triangulation in the Bridge Department.

It was recently reported by the Virginia Department of Highways that the Tellurometer measured 40 miles in 40 minutes. During this time, the instruments were set up, measurements made and the equipment dismantled. Actual measuring time, including a number of readings at various frequencies, may require no more than 10 minutes. The old method of surveying with rod and chains took a minimum of four days if the terrain was relatively flat and up to a month if it was mountainous.

Only one person is required at each end of the line to set up and make the measurements, but at present two men are being used for the operation. The Tellurometer does not require an operator who is skilled in electronics. With several days of training, the novice can take readings with little or no trouble.

The Tellurometer measures only the distance between two points. Horizontal and vertical angles are obtained in the usual manner by transit or theodolite. Fog, rain or other weather conditions do not interfere with the operation and accuracy of the equipment.

The Tellurometer is not the first product in the world of electronics to take its place in highway work. It is, however, the first piece of equipment using electro-magnetic waves to be placed in the hands of the highway surveyor and its full capabilities are yet to be realized.

The Cover

The cover shows our new Tellurometer in action. Reading the instrument is Carter Reams, while John Sherbert, head of field parties, takes notes. Background for the picture is a four-lane section of US 70 between Raleigh and Durham. Cover photo by W. D. Hood, Jr., head of the Highway Department's photo lab.

New Pay Plan Brings Many Benefits

Automatic And Merit Increments Increased; Maximum Salaries Raised; Hundreds Of Employees Unfrozen In New Plan Effective With June 18 Pay Period

Since the last issue of ROADWAYS Magazine, the State Personnel Council has adopted a new pay plan for all State employees. It went into effect for Highway Employees on June 18 and for all other State workers on July 1.

Commenting on the new plan before the Highway Commission at its May 25 meeting, Highway Director W. F. Babcock said, " we have worked closely with the State Personnel Department and Council in the development of the plan as it relates to Highway Employees, and we heartily recommend it as a far-sighted program which will benefit many of our employees immediately and all employees eventually."

Essentially, the new pay plan reduces the number of salary grades, increases many of the minimum salaries, increases all increment values and allows all employees to advance in pay more rapidly. The plan also increases the maximum of all salary ranges and unfreezes approximately 1,800-2,000 Highway Employees.

Immediately after passage of the plan by the Personnel Council, Division Highway Engineers, Office Engineers and others were called to Raleigh for an explanatory meeting. In addition to going over details on preparation of needed reports to set the program into motion, field personnel were handed enough memorandums to distribute to all highway personnel showing exactly how the new plan would affect them and listing their new salary.

By the time this issue of ROADWAYS reaches you, it is hoped that you have been informed on how the plan affects you and that you know your new salary range and grade, as well as the increments you may receive on either an automatic or merit basis in the future.

While the Highway Personnel Department has made a concerted effort to inform all of you on the new pay plan, many questions will naturally arise. If you have questions or problems which need an answer, you are urged to contact your supervisor, Department Head or Division Engineer and, if the question cannot be answered at that level, to address the inquiry directly to the Highway Personnel Office in Raleigh. The Raleigh office will welcome any such questions and will answer the inquiry either in person or by letter.

For Highway Employees, the new pay plan went into effect with the beginning of the June 18 pay period. For employees whose salaries were immediately increased, checks reflecting these increases will be delivered on July 15. Three categories of employees would recieve such salary increases. First—those employees who were receiving minimum salaries under the old plan and who will now be advanced to the new minimums. Second—those employees eligible for an automatic salary increment which would have been due on July 1, (now June 18). Third—those employees who were eligible and received a merit increment which would have been due on July 1, (now June 18).

A great many employees who received no immediate benefit from adoption of the new plan will now have an opportunity for higher salaries in the future. Between 1,800 and 2,000 Highway Employees who were frozen to present salaries under the old plan now have the promise of higher wages in the future for the maximum salaries, for all salary grades, were increased. This points up the long-range value of the new plan for practically all employees.

The new plan also achieves a percentage uniformity of increment value throughout the whole range of highway salaries. Before, increment values varied all the way from two per cent to five per cent of total salary. Now all increments, both automatic and merit, amount to approximately five per cent of total salary.

Actually, this uniformity in percentage results in a steadily increasing dollar value of increments as employees increase their seniority. As an employee makes more, the five per cent (of total salary) becomes more valuable in actual dollars. This is shown by a glance at the salary scale reproduced in ROADWAYS on Page 2.

By increasing the dollar value of increments the longer an employee works, the new plan recognizes the value of seniority and experience of employees.

The newly adopted pay plan also provides faster salary advancement by reducing the number of steps between the minimum and maximum in each salary grade. Formerly, there was a zero step which was considered the minimum and there were seven more automatic and merit steps to the top.

Now the number of steps has been reduced to five. Step No. 1 is the minimum and there are only five other steps to the maximum in all salary grades.

A look at the salary schedule will show that the first three steps are automatic annual increases, while steps 4 through 6 are in the merit area. In the merit area, employees may be granted increments by their supervisors, based on quality of job performance and on the availability of funds within the Department or Division in which the employee works.

Each year, the various Departments and Divisions have available for granting merit increments two-thirds of the money which would be needed to give all that Department or Division's eligible employees a merit increment. The two-thirds allowance for each Division or Department is basically the same as it was under the old plan, except that more money is available within a Department or Division because of the increased amount of the merit increments.

Several persons have asked if the new pay plan, with its increases for some employees, is an accomplished fact. IT IS. Employees eligible to receive greater minimum salaries or persons who were eligible and were granted automatic or merit increases, effective with the beginning of the pay period, June 18, 1960, have already received or will shortly receive checks reflecting these increases.

Adoption of this new pay plan by the State Personnel Council is an official act, and insures that employees whose salaries were increased will continue to enjoy the benefits of the increases.

New Salary Scale

SALARY GRADE	AUTOMATIC					MERIT				
	1		2		3	4		5		6
42	$1836	96	$1932	96	$2028	96	$2124	108	$2232	108	$2340
43	1932	96	2028	96	2124	108	2232	108	2340	144	2484
44	2028	96	2124	108	2232	108	2340	120	2460	120	2580
45	2124	108	2232	108	2340	120	2460	120	2580	132	2712
46	2232	108	2340	120	2460	120	2580	132	2712	132	2844
47	2340	120	2460	120	2580	132	2712	132	2844	144	2988
48	2460	120	2580	132	2712	132	2844	144	2988	144	3132
49	2580	132	2712	132	2844	144	2988	144	3132	156	3288
50	2712	132	2844	144	2988	144	3132	156	3288	168	3456
51	2844	144	2988	144	3132	156	3288	168	3456	168	3624
52	2988	144	3132	156	3288	168	3456	168	3624	180	3804
53	3132	156	3288	168	3456	168	3624	180	3804	192	3996
54	3288	168	3456	168	3624	180	3804	192	3996	204	4200
55	3456	168	3624	180	3804	192	3996	204	4200	204	4404
56	3624	180	3804	192	3996	204	4200	204	4404	228	4632
57	3804	192	3996	204	4200	204	4404	228	4632	228	4860
58	3996	204	4200	204	4404	228	4632	228	4860	240	5100
59	4200	204	4404	228	4632	228	4860	240	5100	264	5364
60	4404	228	4632	228	4860	240	5100	264	5364	264	5628
61	4632	228	4860	240	5100	264	5364	264	5628	276	5904
62	4860	240	5100	264	5364	264	5628	276	5904	300	6204
63	5100	264	5364	264	5628	276	5904	300	6204	312	6516
64	5364	264	5628	276	5904	300	6204	312	6516	324	6840
65	5628	276	5904	300	6204	312	6516	324	6840	336	7176
66	5904	300	6204	312	6516	324	6840	336	7176	360	7536
67	6204	312	6516	324	6840	336	7176	360	7536	384	7920
68	6516	324	6840	336	7176	360	7536	384	7920	396	8316
69	6840	336	7176	360	7536	384	7920	396	8316	408	8724
70	7176	360	7536	384	7920	396	8316	408	8724	444	9168
71	7536	384	7920	396	8316	408	8724	444	9168	456	9624
72	7920	396	8316	408	8724	444	9168	456	9624	480	10104
73	8316	408	8724	444	9168	456	9624	480	10104	504	10608
74	8724	444	9168	456	9624	480	10104	504	10608	528	11136
75	9168	456	9624	480	10104	504	10608	528	11136	564	11700
76	9624	480	10104	504	10608	528	11136	564	11700	576	12276
77	10104	504	10608	528	11136	564	11700	576	12276	624	12900
78	10308	528	11136	564	11700	576	12276	624	12900	636	13536
79	11136	564	11700	576	12276	624	12900	636	13536	684	14220
80	11700	576	12276	624	12900	636	13536	684	14220	708	14928
81	12276	624	12900	636	13536	684	14220	708	14928	744	15672

This salary scale shows that the nnmber of grades has been reduced, and the maximums, as well as dollar value of automatic and merit increments have been increased. The grades are shown in bold face type, with the valne of the increment between steps in light face type. For example: the starting salary in grade No. 50 is $2712; the first automatic increment has a valne of $132; the second, $144, etc., to a maximum salary of $3456 in step 6 of the pay grade. The above schednle took effect with the pay period bginning June 18. If yon have not already been notified of your grade and step, consult your supervisor or the personnel office in Raleigh.

Some have asked if further legislation will be required to continue the benefits of the new plan. **No legislative action in the future will be needed to carry out the approved salary program.**

In adopting the long-range program, the State Personnel Council specifically stated that it is not a substitute for additional recommendations which may be made to the next General Assembly. Several other recommendations, among them, a proposal to provide an additional salary step for longevity, will be a part of the Personnel Council's recommendations for new employee benefits next year.

While the new pay schedule was not intended and did not result in an across-the-board increase for employees, it did provide for increased maximum salaries for all salary grades, and resulted in increases to new minimums for 830 employees who were working at the old minimum salaries. In addition, approximately 1,800 to 2,000 Highway Employees found their salaries unfrozen under the new plan, and they became eligible for immediate or future salary increases on either an automatic or merit basis.

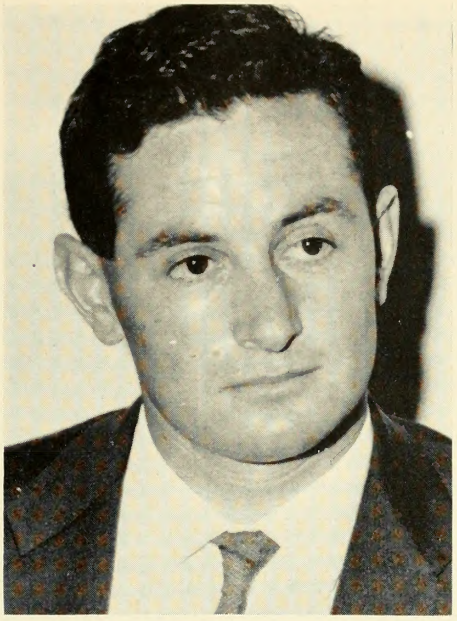
Several years of research and comparison with other States preceded adoption of the plan, while actual details of the new salary schedule required many months.

In reality, the new schedule is a long-range program to provide more realistic pay raises and provides better rewards for quality service and work.

By reducing the number of salary grades, the entire pay schedule is more streamlined and efficient.

Under the new plan, an employee can progress from the minimum to the maximum in a particular salary grade two years quicker than before. Under the old plan, at least seven years' service was required for an employee to move from the minimum to the maximum. Under the new plan, an employee may earn and receive his automatic and merit increases and move from the minimum to the maximum salary in five years.

Director Babcock had high praise for the work of Department and Division personnel who worked rapidly making ready for the plan to take effect on June 18. The deadline for completing increment information came three days after the meeting in Raleigh and practically everyone made it, allowing the Commission to put the plan in operation on schedule.



Robin Underwood

Australian Engineer Impressed By Many 4-Lane Roads In NC

"I am amazed at the number of cars and the way people seem to be dependent on them," said a recent foreign visitor to North Carolina.

Robin Underwood of Melbourne, Australia spent a week in North Carolina studying planning and construction methods in North Carolina and traveling the roads. Underwood is a Traffic Engineer for the Highway Department of Victoria, Australia, and is a recent graduate of the Yale Bureau of Highway Traffic Engineering.

Winner of a scholarship to Yale, Underwood has already traveled extensively in America and plans to study road methods in Britain and on the European continent before flying back to his native Australia in September.

In sharp contrast to his own native Victoria, Underwood said he was most impressed with the many four-lane divided and controlled access facilities in North Carolina. "We have only one four-lane road in all of Victoria, and that one leads out from Melbourne, a city of two million population," said Underwood. He added that the road is only 41 miles long.

He explained that a very high traffic count for a rural Primary Road in Victoria would be 3,000 per day, although he said during the heaviest tourist season in the summer, some roads would build up to 16 or 20,000 vehicles per day in the beach areas and around Melbourne. Practically no roads in Victoria have hot-mix asphalt and there are no concrete roadways.

Underwood explained that relatively low traffic counts warrant only a surface treatment, but he indicated that plant-mix asphalt is being used on the more heavily traveled arteries in and around the large cities.

The Highway System of the State of Victoria embraces some 10,000 miles of public roads, and both maintenance and construction costs are borne by the Commonwealth of Australia, which distributes motor fuel tax revenues on the basis of area, population and mileage.

"Some of the Australian States don't get a very large share under the formula," said Underwood, "but efforts to change it have been to no avail."

In this country, Federal Aid funds are distributed to the States on the basis of area, population and mileage, with the exception of the Interstate allocation which is figured on a needs basis. All State funds in North Carolina are allocated to the various areas on a needs basis.

Underwood indicated that he would like to see such a needs formula adopted in Australia, but discounted chances for such a program in the forseeable future.

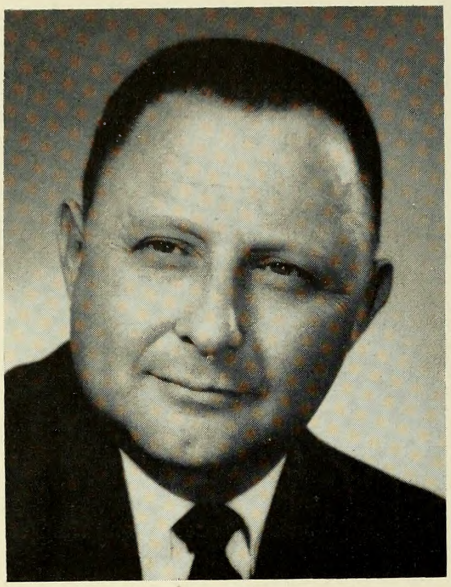
Oregon Inlet Ferry Has Busy Schedule

A total of 782 vehicles was carried across the Oregon Inlet ferries on Memorial Day. Most of this traffic was northbound, according to H. A. Glynn, safety supervisor for the ferries, who said about 90 per cent of the traffic was headed north.

It was the result of three days visitation to Hatteras and Ocracoke Island for the holiday, and they were returning home on Monday.

By keeping three ferries running, traffic was cleared up by night and none were left on the south side of the inlet. Recent dredging of the channel has eliminated the delays which harassed the service for four months.

From The Director's Office



Dear Fellow Employees:

It's a good idea occasionally for us to stop routine activities long enough to take stock of our work—review accomplishments and study problems. As our administration passes its third anniversary, I would like to take this opportunity to retrace some of the steps we have taken in our highway program during this 36-month period.

The first job for all of us is to serve the public to the very best of our ability, and I think our Highway organization has made outstanding progress in this period, setting new records for construction, improving general maintenance techniques and launching new research projects into better methods. A tremendous number of citizens who know of these efforts, as well as the tremendous job that was done during two hard winters, have told me they have a very high regard for our organization and its employees. It is my feeling that all of us can take justified pride in the efforts put forth as well as the accomplishments which are bringing to our State one of the finest road networks in America.

I am happy to say that progress is not only apparent in road work, but also within our own organization, especially with respect to classifications, salaries and working conditions. Significant accomplishments might be listed as:

(1) Salary ranges for engineering classifications increased. We are now competing favorably with other States in the Southeast, keeping our own experienced employees and attracting more qualified engineering graduates. This has meant important salary increases for many persons in the general engineering classifications.

(2) Some 5,600 maintenance employees classified. This has brought the same uniform benefits to our maintenance people that have been enjoyed by other employees since the original classifications. It has also made possible the periodic review of maintenance classifications as a framework for future improvements.

(3) Work week of maintenance employees reduced from 50 to 45 hours. Started as an experiment, it was shown we could shorten the work week at no sacrifice to general road maintenance.

(4) Increased the number of bridge tenders to reduce their work week to 60 hours and thus assure them a uniform 5-day work week.

(5) Consistent retirement policy established to insure uniformity, and resulting in scores of promotions for qualified personnel on a continuing basis. This was accomplished with assurance that retiring personnel would have all benefits from the Retirement Act and Social Security provisions.

(6) In-service training program greatly enlarged. Nine schools were established, instructors appointed, curriculums prepared with courses taught on State time, and graduates given training to help in qualifying for jobs of greater responsibility.

(7) Cooperative cost-sharing program for successful completion of accredited correspondence courses, with the Highway Commission joining employees with one-half course cost.

(8) Standard policy on compensatory time off established. Uniform record keeping will be used as a basis for granting compensatory time off in the system to be installed shortly.

(9) Uniform pay plan set up to insure regular bi-weekly payday. Deductions for the payroll adjustment check are now complete and most persons understand more fully that smaller pay checks are a result of increased Social Security payments, higher insurance premiums and the new State withholding tax, and that such deductions would have resulted in smaller take-home pay regardless of the pay plan in effect.

(10) New State pay plan inaugurated on June 18, resulting in the unfreezing of 1800-2000 employees, higher increment values and increased maximum salaries. We were happy to cooperate fully with the State Personnel Department and Council in establishing these benefits for highway employees.

(11) Scholarship to Yale Traffic School for young engineers established. This will be of great benefit for those wishing to increase their proficiency in the specialized field of Traffic Engineering.

(12) Sponsored the State Highway Conference annually for the past two years. This conference held in cooperation with N. C. State College, and attended by hundreds of our highway employees, has been hailed as one of the most helpful means of increasing job efficiency through workshop training and mutual cooperation in our own organization and with leading highway experts from our own and other States.

As in the past, it will be our continued goal to work constantly for the improvement of personnel relationships in all areas, with close attention being given to working conditions and remuneration for we believe a happy highway family is not only desirable in itself but will result in a better highway product for the people of our State.

Sincerely yours,

W. F. Babcock

W. F. BABCOCK

New Condemnation Law In Effect July 1

New and far-reaching legislation concerning the Highway Commission's procedures on condemnation cases became effective July 1.

Enacted by the 1959 General Assembly, the new law drastically changes the steps which are necessary before the Commission can enter property for the purpose of highway construction.

Heretofore, the Commission had unrestricted authority to let road contracts and begin construction on private property even though settlement of the right-of-way claim for the property had not been finally settled and no payment had been made to the property owner. In such cases, the property owner was simply notified that the Commission could not delay the construction project and intended to proceed with work.

Under the new statute, entry on private property for construction purposes cannot be made until one of three conditions has been met:

(1) The right-of-way claim has been settled to the satisfaction of both the property owner and the State Highway Commission.

(2) The property owner has given the Commission written authority to enter his property for construction work even though no final settlement has been made, or,

(3) The Highway Commission, unable to secure agreement, has filed an official condemnation action in the courts and has deposited with the Clerk of the Superior Court the sum of money estimated to be fair compensation for the right-of-way easement or purchase.

Use of the condemnation authority will remain as a "last ditch" measure to be used only after all other efforts to negotiate a right-of-way settlement have been exhausted. The Commission's appraisal and negotiation policy will continue in effect and is in no way altered by the new Statute.

However, when it does become necessary for the Commission to use the power of eminent domain, it will have a definite procedure to follow through the courts, rather than merely to enter the property and let such entry constitute a condemnation.



AT RIGHT-OF-WAY MEETING—Members of the Highway Department's legal staff met recently with Right-of-Way Department representatives. Left to right, Bill Murray, Charles Barbee, Harrison Lewis, Gordon Gibbs, Jim Bullock, Witt Snelson, Withers Davis, W. H. Webb and Kenneth Wooten. Representing the Legal Department are Assistant Attorney General Kenneth Wooten, Barbee, Lewis and Bullock. Snelson, Murray and Davis are Area Right-of-Way representatives and Webb and Gibbs are Right-of-Way Engineer and Assistant Right-of-Way Engineer, respectively.

First step in instituting condemnation action will be the filing of a civil action against the owners of the property. This action will be filed in the Superior Court of the county in which the property is located. Appropriate papers will be served on the property owner through regular court proceedings, notifying the owner that his property holdings are being condemned for highway purposes. Among other requirements, the papers served will quote the authority under which the Highway Commission is acting, will describe the property which is being condemned and will contain a statement as to the amount of money which the Commission feels is just compensation for final settlement of the right-of-way claim.

The most important single feature of the new law is that the Commission is obligated to deposit the amount of fair compensation with the Clerk of the County Court. Once this payment has been made to the Clerk, it is automatically available to the owner of the property and, after proving his ownership of the property free and clear of any lien against it, the property owner may withdraw any portion or all of the deposit.

The property owner has a two-year period in which he can make such withdrawal, and he can withdraw and use the money for any purpose he wishes while in no way compromising his right to recover a larger right-of-way payment through the courts later on.

There is another restriction on the property owner. Within a period of one year, he must answer the complaint filed against him by the Highway Commission, although he may be granted an extension of up to six months in the event he can convince the Superior Court judge that he has a just cause for requesting an extension filing time.

If, during the one year (or eighteen months), the property owner has failed to answer the legal papers filed against him by the Highway Commission, his failure is considered as an admission that the offer of the Highway Commission and the deposit made is, indeed, just compensation for this right-of-way claim and he forfeits his legal right to seek additional compensation through a court case.

While the new law may easily result in far more condemnation cases than the Commission now has, it has definite advantages for the property owner—especially, a property owner who may be required to move from his residence or business as a result of highway construction.

Before the new law became effective, a property owner who wanted more money than the Highway Commission felt justified in offering him had no method of obtaining a ready-cash settlement of part of his claim while seeking more money through the courts. He either accepted the Commission's settlement offer as a fair compensation of damage or declined to accept the offer, in which case, he was not eligible for any immediate payment.

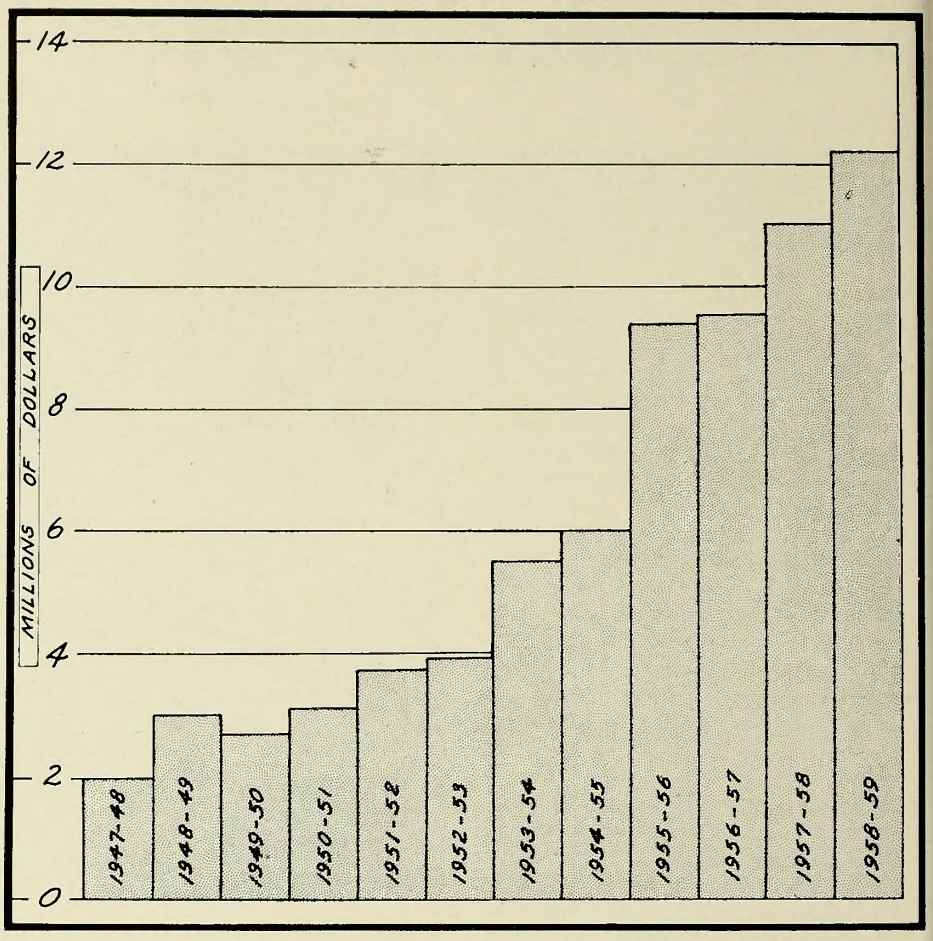
Under the new Statute, the property owner can refuse final settlement and leave determination of fair compensation up to the courts, but, at the same time, be eligible to full use of the Commission's deposit for any moving or rebuilding expenses he may have.

The new law has the further effect of tightening up the law so that right-of-way claims will not be left unsettled but still outside the province of the courts. Such cases will now either be settled, under active negotiations or under formal condemnation proceedings.

At a recent Raleigh meeting of Area Right-of-Way representatives, Right-of-Way Engineer W. H. (Buck) Webb told negotiators not to drop negotiations with property owners simply because the Commission found it necessary to file condemnation against a property owner as a means of proceeding with a highway project.

Webb told the area men that filing the formal proceedings did not mean negotiations should be broken off. Instead, he said, it should mean that we redouble our efforts to reach a settlement short of an actual jury trial of the case.

Although it is difficult to predict the precise effect of the new law, some officials feel there is a natural reluctance on the part of many persons to go to court, and that formal filing of condemnation proceedings may cause property owners to take a long hard look at the Commission's offer of carefully appraised damages. On the other hand, a good many of the property owners may give the Commission written authority to enter their property while they have a longer period of time to consider whether or not they will accept the Commission's offer.



Expenditures for right-of-way have grown from less than $100,000 in 1929 to more than 12½ million this year (an increase of 15,000%). As shown on the graph, the greatest increase was in the post World War II period.

The new condemnation law tends to highlight the whole right-of-way situation in North Carolina and places an increasing importance on the entire appraisal method of determining damages.

In 1958 the Highway Commission altered its entire right-of-way policy calling for detailed appraisals of all damages resulting from highway construction projects. In most cases, these appraisals are handled by competent real estate appraisers who are located in the general area of the project and are familiar with current market values. These men work for the Commission on a daily fee basis and are not permanently employed by the Commission. In recent months, because of a shortage of such outside appraisers, the Right-of-Way Department has been training its own staff appraisers in order to keep up with the heavy demands for their services.

Appraisals are made after an exhaustive personal survey of the property in question. Titles are searched, property lines established, sales on similar properties in the area in recent years are analyzed, photographs of the property are made and a carefully documented appraisal is submitted to the Area Appraiser who reviews the work and then forwards it to the State Appraiser for further review. On commercially developed property, it is customary to get two such independent appraisals and the Commission has authority to reject any appraisal as too high or too low and call for additional appraisals.

Once an appraisal is approved by the State Appraiser, it is turned over to the Area Negotiator for assignment to field right-of-way representatives, who in turn contact the individual property owner with an offer.

One of the hardest points to get across to property owners is that the Right-of-Way agent or representative who calls on him has no authority to offer either less than the appraised damage figure or more than that amount.

North Carolina and many other States have a long history of "horse-trading" for right-of-way. Under the old system, a representative might begin with an offer of $200 on a parcel of land which he estimates to be valued at $1,000. Beginning at the low figure, would leave him in a comfortable margin of $800 with which to negotiate. If a property owner happened to be relatively easy to deal with, the final settlement might actually be under the original damage estimate of $1,000 while, in some cases, the negotiator might have to exceed his original estimate. In all cases, the estimate of damage and the negotiation for settlement was handled by the same person, and this frequently led property owners to the charge that the Highway Commission was endeavoring to pay as little as possible for property without considering actual value. In fairness to the many competent and devoted right-of-way representatives which the Commission has had, it must be said that such criticism was rarely if ever justified, but it was leveled anyway.

There were at least two very good reasons for changing the methods of determining property damages. For one thing, Federal regulations adopted within the last few years required appraisals on all projects in which Federal Aid was involved. Secondly, with the natural increase of right-of-way costs over the years, acquisition of private properties became really "big business".

For example, total annual right-of-way expenditures of the Commission in 1929 were under $100,000. Thirty years later, such annual costs had risen to $12,500,000 and showed every sign of increasing further. This can be seen graphically on the chart which ROADWAYS is publishing this month.

There were several natural reasons for the increase in right-of-way purchases. For one thing—there has been a tremendous increase in property valuations through normal spiraling of prices or inflation. Secondly, growing traffic volumes have called for additional four-laning of roads and a consequent increase in the amount of land needed. Also, in many cases, there has been developed a need to widen existing roads or to build additional adjacent pavements in areas where the abutting right-of-way had developed with resident or commercial buildings.

Expenditures for right-of-way acquisition soared again when the giant Interstate program got under way. On the 775 mile Interstate System in North Carolina, complete control of access is a requirement, both as a safety measure and method of building more permanence into the roads. Since private properties do not have the right of direct access into these roads, damage to property is automatically greater, and is reflected in higher appraised damages. More and more, the limited and controlled access feature is being used on major Primary Roads, as well.

More urban construction has also increased right-of-way costs. A good example is the Asheville Expressway where total construction costs almost exactly matched total right-of-way costs. The total cost of the project was $6,000,000, half for right-of-way acquisition and half for construction.

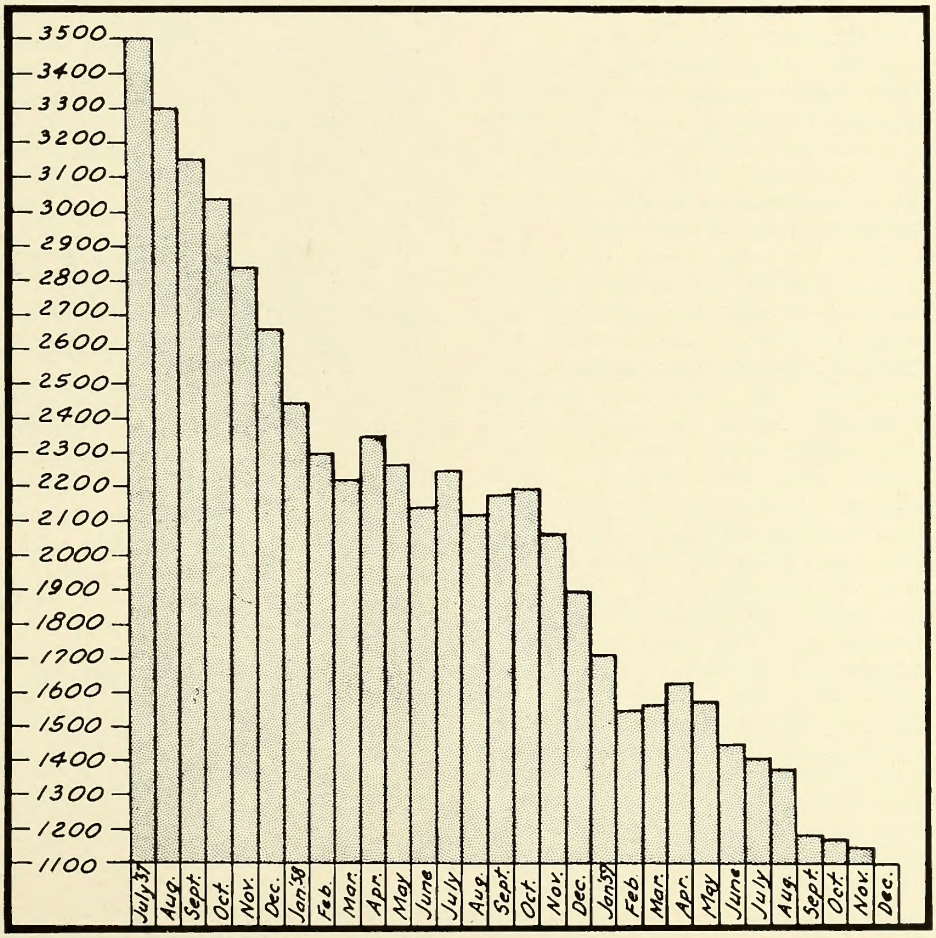
In recent months, it is estimated that right-of-way for Interstate projects in rural areas amounts to about 20-22% of the total construction costs, while it runs around 16-18% of the total tab on Primary Road projects.

With such property purchases involving this tremendous amount of public funds, it seemed only good sense that the most careful and competent appraisals should be made on all properties in order that the Commission would have available the best possible information on which to base an offer.

The type of individual who wants to gouge the Highway Commission for every possible dollar will always be around, eager to argue his case vehemently in or out of the courts, but the Commission stands on much firmer ground in the courts if it can show that every effort was made to determine just compensation and that the property owner was offered the amount of the appraisal. There has been a considerable amount of evidence that more and more property owners are realizing that the Commission has gone to a lot of trouble in determining true value of damages, and the result has been that more individual owners have been willing to settle short of the courts at a tremendous saving in processing fees.

There is another welcome sign that a good many juries are waking up to the true nature of the fellow who seeks court action only as a means of deriving an exaggerated payment and juries, in some areas at least, are beginning to refuse to go along with excessive payments and render settlements which are

(Continued on page 17)



A tremendous back-log of unsettled right-of-way claims estimated at 3,500 faced the highway administration on July 1, 1957. The graph shows the results of an intensified effort to reduce these claims and at the present time, unsettled right-of-way claims total less than 900.

N. C. S. H. P. E. A. Association News

VOLUME 9—EDITION 4 JULY-AUGUST

ANNUAL UNIT MEETINGS—Not all complete as of this writing but those definitely scheduled are as follows:

7/1 Unit 13 Lake Tahoma Steak House, Marion
7/6 Unit 15 Fin-Crest Lake, Raleigh
7/7 Unit 6 Plantation House, Fayetteville
7/8 Unit 3 Marina, Wrightsville Beach
7/13 Unit 4 Parker's on US 301 near Wilson
7/15 Unit 5 Armory, Oxford
7/20 Unit 2 Respess Brothers, Greenville
7/29 Unit 8 Sanford Fairgrounds
8/3 Unit 10 Employees' Club House, Monroe Prison Camp
8/4 Unit 11 VFW Club House, North Wilkesboro
8/5 Unit 9 Town Steak House, Winston-Salem

Unit 1 meets on 7/22 and Unit 7 on 7/27, sites undertermined.

CONVENTION DATES are set for Asheville, Hotel George Vanderbilt, Oct. 27-29. Tentative plans are to have the Governor-elect present, and our principal speaker will be the world-famous humorist, Edmund Harding. Complete details of the program will be printed in the next issue of ROADWAYS.

ICS COURSES—For many years employees of the Highway Commission have turned to ICS for part or all of their technical training. Engineering aides have found the ICS courses practical job-related, written in a language understood by those with little or no engineering background. Recently, the Department re-affirmed its belief that those employees who spend some of their spare time in studying will benefit themselves and increase the efficiency of the Department. ICS courses are one of the best ways these goals can be reached. The highway engineering courses include mathematics and elementary drawing, mapping, elementary and advanced surveying, materials, highway construction. Upon completion, grades can continue for a diploma in civil engineering, and those who have college credits may transfer any that are included in ICS courses and pick up where they left off in college.

Average time to complete an assignment is about 15 hours, and those who are fast learners are not held back. All Divisions have been supplied with material for those seeking further information, and ICS has local representatives covering North Carolina who will be glad to counsel with anyone interested in improving their present positions. Mr. Badgett's office will also furnish additional information at any time on possible rebates of costs on completion of courses.

DO YOU KNOW THAT the rule for hospital confinement, under our insurance plan, provides coverage even though you are in the hospital less than 18 hours—IF you go to the hospital for emergency care following as accident, or if you undergo any surgery, including minor surgery in the out-patient clinic of the hospital. For the other hospital confinements a minimum of 18 hours confinement applies. Consult your booklet for "how much".

INSURANCE features now include enrollment at retirement in special hospital-surgical plan with Connecticut General. Employees retiring at age 65 can apply through the office of the Compensation Officer in Raleigh for additional information, and can be covered without examination within 30 days after retirement. The Plan "D" allows daily hospital room and board benefits up to $10 for maximum of 21 days, and allows surgical operation reimbursement, according to schedule, up to $200. The cost of this for age 65 is $19.10 per quarter for the individual male, $19.24 per quarter for the individual female and $35.62 per quarter for a couple. The premium costs increase as age goes higher at application and are available upon request to this office.

The Secretary Says

Even if you are on the right track, you'll get run over if you just sit there.

The less people know, the more they want to tell it.

What's left after you pay your bills is what is known as a headache.

The optimist says his glass is half full; the pessimist says his is half empty.

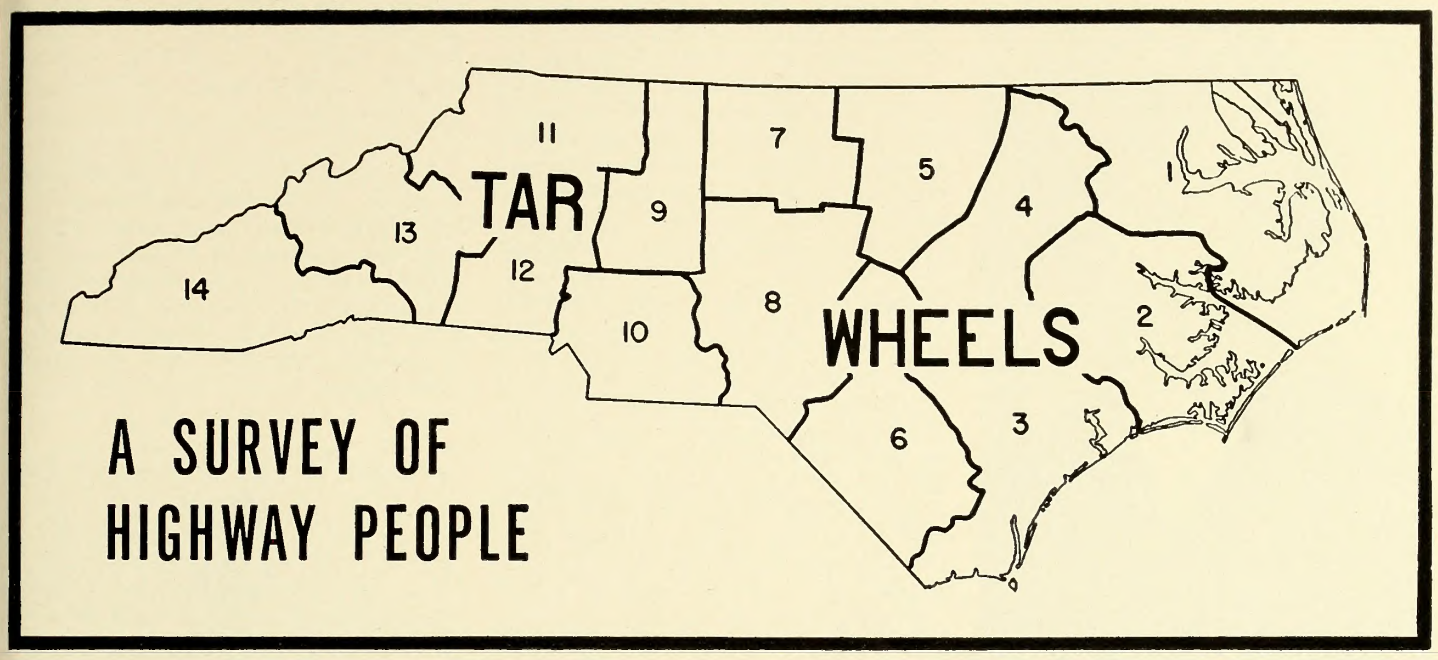
They laughed at me when I sat down at the piano—I had forgotten to bring the stool.

Marriage sometimes reminds us of the telephone—you don't always get the right party.

"CONNIE" Mac Adam



Today's highways and streets should match today's traffic



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

BY JEWEL ADCOCK

PHOTOGRAMMETRY — *Leighton Elliot*, *Bobby Wood* and *Joe Creech* went to summer Reserve Camp at Fort Bragg for two weeks in June. Good luck to *Art Denning*, who resigned to accept a position with L. E. Wooten & Co. An attractive addition to the staff is Miss *Gwendolyn Hester* of Oxford and a sophomore at Mered'th. Employed for the summer, Gwen plans to return to college next fall. *Chester Gray* and his family vacationed the first week in July at his parent's home in St. Petersburg, Florida. *John McDonald* chose Atlantic Beach for his vacation spot the first week in July. Pertinent information to the opposite sex: *Jim Futrell* and *Charles Watson* are the proud new owners of those bright-red, M. G. sports cars you've seen parked around the Highway Building.

ROADWAY DESIGN — Our deepest sympathy to *S. H. Hall* upon the recent death of his mother. Welcome to new employees, *Garland Stone*, *William T. Minter*, *Wanda Scott* and *Judy Stephenson*. *John Wiles*, a June graduate of State College, has returned to work in the Roadway Drafting Room. Our very best wishes to *Ronald R. Davis*, Draftsman, who was married to Mary Eliza White, May 28, at Edenton Street Methodist Church in Raleigh. Congratulations to Mr. and Mrs. *Charles Chambers*, who announce the birth of a son, Brian Keith, May 20, and to Mr. and Mrs. *Richard Smith* upon the birth of a daughter, Yvonne Denise, born May 22. Best wishes to *Margaret Williford* and *Joyce Woodlief*, both Roadway Stenographers, who recently resigned to take up full-time housekeeping.



Mrs. Gus Saparilas is the former Neena Chimos, daughter of Mr. and Mrs. John P. Chimos of Raleigh. Her marriage to Mr. Saparilas, son of Mr. and Mrs. Nick Saparilas of this city was solemnized May 15 in the Greek Orthodox Church in Raleigh. Immediately following the ceremony, a banquet was held at the Hotel Sir Walter.

The bride is a graduate of Broughton High School and attended King's Business College.

The bridegroom was educated at State College and is a Highway Engineer for the State Highway Commission.

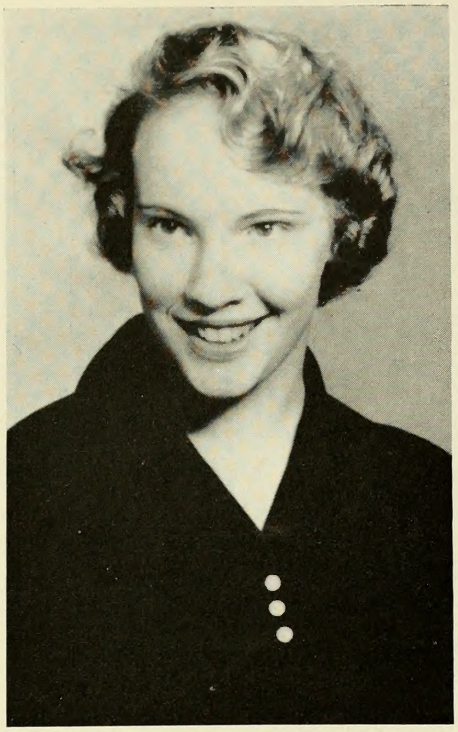
They are now in their new home at 801 Wimbleton Drive, Chestnut Hills, Raleigh.

FEDERAL CONTACT — The *S. A. Yeargan's* visited Dr. Creighton Wrenn of Mooresville the week of July 3 at his Long Beach cottage.

BRIDGE MAINTENANCE—Mrs. *Alice Throckmorton*, who for the past 12 years worked for Ginter Park Presbyterian Church in Richmond, Virginia, has recently joined the Department as a Steno II. Employees were sorry to lose *C. T. Jones*, skilled bridgeman with the Bridge Maintenance crew in New Bern, who died the last of May after 13 years of loyal service with the Commission.

EQUIPMENT—*Faye Pridgen* recently resigned to keep house. *Nancy Dew Fowler* is proud of her new baby boy. John Upton, Jr., son of the *J. W. Uptons* returned home in April after serving four years in Strategic Air Command with the U. S. Air Force. The *George Brinkleys* report a fine vacation in South Bend, Indiana recently to visit their son. Welcome to Mrs. *Betty Massengill* and Mrs. *Evelyn Linville*, lastest additions to the staff. It's nice to have the following temporary employees: *Judy Buchanan*, *Norma Jean Hunnicutt*, *Nancie Clark* and Mrs. *Ruby Lee Johnson*. *Carolyn Fowler*, with her husband and baby daughter, recently moved from Buies Creek to Apex.

RIGHT OF WAY — Best wishes to *Peggy M. Moore* of Raleigh and George



Miss Claire Catherina Schmidt, daughter of Location Engineer and Mrs. Lawrence Mahinske, will become the bride of Richard Francis Krebs, son of Mrs. F. P. Loftus and the late John A. Krebs of Baltimore, Maryland, at our Lady of Lourdes Catholic Church, July 16. The bride to be is a graduate of Cathedral Latin High School and is employed at N. C. State College. Her fiancé holds a position as an Electronics Technician at Southeastern Sight and Sound. The couple will make their home in Raleigh.

S. Vollmar of Trenton, New Jersey, who became Mr. and Mrs. in a June 4 ceremony at the Sacred Heart Cathedral in Raleigh. And congratulations to *Tom Parker*, a newcomer with Right of Way, who was married June 26 in Dunn to Miss Joyce Godwin. Proud new parents are Mr. and Mrs. *Hal English*, a son, Mark Hal, born April 3, and Mr. and Mrs. *Fred Adcock*, son Frederick, Jr., who arrived May 18. *C. A. Huntley* of Raleigh has joined the Department as Division Appraiser. Cupid's arrow points to *Barbara Moore*, who announces her engagement to Robert Amick of Raleigh, auditor for J. C. Penny Company. Barbara and Bob will tie the knot November 27.

LANDSCAPE—*F. H. Brant* attended the Sixth Annual Landscape Short Course at Virginia Polytechnic Institute, Blacksburg, Virginia, May 4-6. He presented a paper on "Planning Roadside Vegetation to Reduce Maintenance". Also attending the Short Course were *F. H. Bowen*, Landscape Designer in the Raleigh office and *A. L. Coltrane*, Landscape Supervisor in Division 7.

FINANCE—Newest additions to the staff are *Clarence Robertson*, Tabulating Section, and *Beverly Danieley*, Accounts Payable. Mr. and Mrs. *Douglas Bailey* are the new parents of a fine baby girl, Deborah Kemp, who arrived at Rex Hospital, May 26. Vacation time is always welcomed. The *Ervin Dixon s* spent two weeks in June in Mississippi. *Jean Hicks* and *Lou Cofield* got their sun tans during two-week vacations in Florida. *Joe Eidenberger* spent a week at home entertaining out-of-town guests. *Mary Tripp* was in New Jersey for a week in May, attending the wedding of a sister and visiting relatives. *Helda Ray* spent the fourth week in June at home to visit with her brother, Thurston, and family, from Seattle, Washington, whom she had not seen in four years. *Jim Austin* and *Raymond Folwel* spent the first two weeks in June at Fort Bragg—Jim, with the National Guard, and Raymond, with the Army Reserve. Best wishes to *Faye Temple*, Key Punch Operator, who became Mrs. Roger Landon Pearce June 25 in Hopkins Chapel Church in Zebulon. Roger is with Westinghouse, and they plan to live in Zebulon.

PLANNING — Mrs. *Blanchie Bradley* and daughter, Linda, visited Blanchie's brother in Wilmington several days in June. *Mertie Dixon* and family have moved into their new home in Greenbrier Estates, Raleigh. *Dot Turner* recently moved into her newly built home on Van Dyke Street. *P. D. Everhart, Jr.* of Orlando, Florida has accepted a position as Research Analyst I in Mr. Jay's office. Newest member of Planning's Drafting Section is *Frank Reich*, who joined the Department May 6 as a Draftsman I. *Jim Austin*, Draftsman I, is resigning to resume his engineering studies at State College. *Polk Denmark* is mighty glad to have his only child, Ann (Mrs. W. D. Beaty), and her husband home from Rhode Island to make Raleigh their permanent home.

BRIDGE—*James Neal* and *James M. Dawkins* have been employed as draftsmen for the summer. *Gerald D. Stone* has transferred from the training program to the Drafting Room. *Robert L. McGarr* has completed his training period in drafting and transferred to another Department. New trainee in drafting is *Robert E. Powell*. Another new face is *Silvio L. Santo-Tomas*, who recently was employed as a Draftsman. Welcome to Mrs. *Mary B. Lewis*, new steno in the Permit Dept., replacement for Mrs. *Jane Jackson* who recently resigned. Good luck to *Joseph R. Warlick*, *R. R. Fitzwater* and *M. S. Burgess, Jr.*, who resigned to accept other positions. *W. J. Rogers* recently spent two weeks at summer camp. Mr. and Mrs. *C. B. Patton, Jr.* took a three-week trip to Kansas to visit Mrs. Patton's home. *A. L. Barnett* attended an Arc Welding school in Cleveland, Ohio during May.

CONSTRUCTION — *Shirley W. Hall*, Steno II, resigned May 19 to accept a position as Steno III at State College. Mrs. *Lucy M. Baker* of Raleigh replaced Shirley, June 6. *Olivia Strickland* vacationed the first week in July at Wrightsville Beach. The *John Davis*' have moved into a new Medallion home in Greenbriar Estates.



Mrs. Arthur Frank Noble, II, who before her marriage June 19, at Pullen Memorial Baptist Church, was Miss Dorothy Virginia Simmons, daughter of Mrs. J. V. Simmons and the late Mr. Simmons of Freeland. Mr. Noble is the son of Mrs. Arthur Frank Noble of Raleigh and the late Mr. Noble. The Reverend W. W. Finlator officiated.

Immediately after the wedding, a reception was held at the Hotel Sir Walter.

The bride holds a position with American Mutual Liability Insurance Company, and the groom is a Bridge Design Engineer with the State Highway Commission.

After a honeymoon to Kill Devil Hills, the couple will live in Raleigh.

SAFETY — The best of luck to *Mary Rajagh* who recently resigned to keep house.

TRAFFIC ENGINEERING — *Andrew Ward* and his family plan a vacation at Ocean Drive, S. C. The *Robert Dodges* will spend their vacation at Holden's Beach. *Ruth Parkerson* attended the State Convention of Business and Professional Women's Club, held in Blowing Rock several days in June. *Carole Walker* is assisting the clerical staff during the summer months. She will resume her studies at Peace Junior College in the fall. *Emily Blount* enjoyed a weeks vacation during June at her parent's home, Wrightsville Beach.

DIRECTOR'S OFFICE — Director *W. F. Babcock* took a month off, combining business with pleasure. While away, he attended the Executive Committee meeting of the AASHO in York Harbor Maine. Commission Secretary, Mrs. *Elizabeth Hughes*, and husband, William, had a nice time touring Florida for two weeks during May.

SECONDARY ROADS — Department Head *John Swain* attended the County Commissioners Association Convention in Morehead City on June 21. Congratulations to *Carol Helton's* husband, Benny, who graduated from Civil Engineering School at State College, May 29. Benny plans to go on to graduate school for the next two years.

LEGAL — *Mary Lib Greene* and husband, Brodie, went on a house party to Carolina Beach the first weekend in June. *Sylvia Kinlaw* joined the group, and all reported a fine time with lots of sun and fun.

ADVANCE PLANNING — Competing with her bright smile is *Ann Patrick's* pretty new diamond ring, which engages her to Charles William Smith of her home town, Laurinburg. Ann and Charles plan a fall wedding. Westward bound! *George Stephens* took his family on a flying trip to Los Angeles, California the first two weeks in July to visit Mrs. Stephens' parents. They also plan to visit friends in San Francisco while on their vacation.

CHIEF ENGINEER'S OFFICE — Congratulations to James Robert Hassinger, son of Mrs. *Virginia Hassinger*, who was married May 20 to Virginia Marie Jordan in the First Baptist Church in Kinston. The Reverend C. E. Ruffin officiated. After a Bermuda honeymoon, the couple moved into their new home in Kinston, where Bobby is associated with DuPont.

LOCATION — *H. Boyce Midgette* is glad to have his son, Butch, home for the summer from school in Morganton. *Frances Smith* vacationed with her two children at Wrightsville Beach the fourth week in June. *Nell Murphy's* husband, Jim, graduated with an A. A. Degree from Campbell College, June 3. A ministerial student, Jim plans to resume his education at another college in the fall.

PURCHASING — *Martha May* and her husband, Jeff, vacationed the last week in May with her parents in Troy and his parents in Andrews. *Charlotte Cameron* vacationed at Carolina Beach the second week in June. *Vance McDaniel* took a week off in May to do a little fishing, but reported his plans were upset by a week of rainy weather. *Leona Sidbury* took two weeks the last of May to stay home and play hostess to her sister, Patricia Wingate, who was visiting her from Miami, Florida. Relaxation at home was *Mary Lee Stephenson's* choice the last week in May. *Betty Wilkins'* golden sun tan was obtained in Fort Lauderdale, Florida the first week in May. *Raymond Jones* and his family got in a lot of water-skiing and boating during their week's vacation at the Pamlico River the first of July. Weekends see *Earl Williams* scuting off to his summer place at Bear Creek. *Ronny Price* took two weeks military leave at Fort Bragg during June.

PUBLIC RELATIONS — The *Pete Bourkes* took a three-week vacation to his home in Nashville, Tennessee and to visit Mrs. Bourke's relatives in Fort Lauderdale, Florida during May and June. *Jeanne* and Herb *Hawthorne*, with their pet dog, Tuffy, spent several days during the Fourth of July vacationing at Virginia Beach.



Mrs. Ethel Jones, secretary in the Maintenance Department, shows off her roses which took many of the prizes at the annual show of the Raleigh Rose Society. Her entries took ribbons in five classes, while her husband, Fred, won a blue ribbon for the best rose arrangement by a man.

MAINTENANCE — Our deepest sympathy to *Paul J. DuPre*, Area Maintenance Engineer, upon the death of his mother in Walhalla, S. C., June 7.

DIVISION ONE

BY M. ELWOOD COPELAND

Division Correspondent

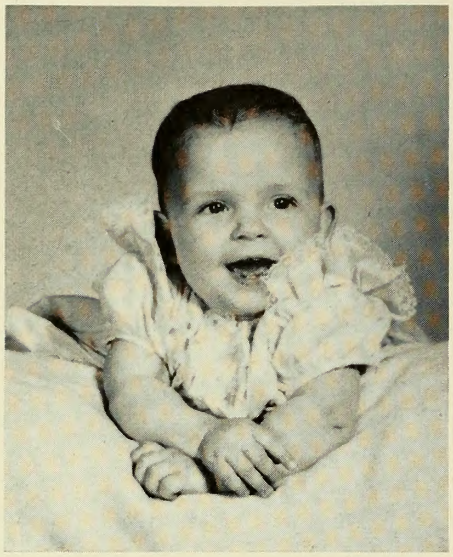
NEW ARRIVALS include Greg Denton Creef, son of the *Warren Creefs* of Manns Harbor. This is the third boy for the Creefs. Warren is a clerk at Manns Harbor shipyard. It's a boy for Mr. and Mrs. *Irs D. Spencer*, also of Manns Harbor. Pop is pilot on the Alligator River Ferry.

ON THE MOVE—*John Wheeler*, Resident Engineer in the First District, has moved from Manteo back to his home in Edenton since the completion of the Currituck Sound Bridge. *Linwood Rawls* of the Construction Department in Elizabeth City, has been transferred temporarily to Dare County. *R. M. Saunders* has been transferred to Burlington. Mrs. *W. F. Sessoms*, wife of the District Engineer at Plymouth, has returned home from a long vacation in Alabama.

BEST WISHES to *M. S. Hoggard*, former Machine Operator, who has gone into the dragline business for himself.

BACK AT WORK after illness are the following: *W. M. "Coone" Smith*, Resident Engineer, who spent a few days at Albemarle Hospital; *H. G. Hobbs*, who suffered a broken foot at work; and *W. Ralph White*, who underwent surgery at Obici Hospital in Suffolk, but is now back on duty at the Hertford Equipment Shop. A quick recovery is wished for *W. V. Cain*, deckhand on the Alligator River Ferry, who was transferred from the Columbia Hospital to the Public Health Hospital at Norfolk; and mechanic *P. L. Moore* who has been on the sick list.

CONDOLENCES to *Jessie G. Taylor* of the Hertford Equipment Shop, whose father died recently and to *James L. Harrell*, sign erector, in the recent death of his sister, Mrs. Bernice Brock.



Six-months-old Wanda Windom is the daughter of Stella R. Windom, who works in the Plymouth District Office.

DIVISION THREE

BY IRENE C. HEWETT

Division Correspondent

WE MISS these employees who retired recently: *C. E. Shepard, Art Mitchell* and *Dalbert M. Coleman* of District 1; and *Leo Batson* of District 2, who retired after exhausting his sick leave. *F. A. Jones* has resigned to enter private business and *Kenneth Chamblee* of Construction has joined an engineering firm.



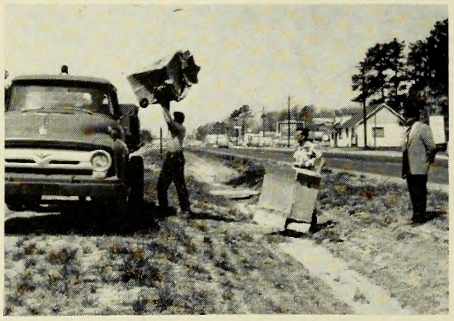
FIRST AID REFRESHER COURSE—Employees are shown at a first aid refresher course held recently. Left to right: Roscoe Hemby, Johnnie Meadows, Maintenance Supervisor for Onslow County; Alvin Pittman, Morris Shepard, Donald Walton, instructor; Horton Lee Hansley, Bill Aman and Furney Willis,

WELCOME BACK, *H. E. Hicks, G. S. Simmons* and *H. H. Watkins,* who have been on sick leave. We are glad to have *D. E. Gurganious* back in the Landscape Department following six months military leave. The good news is that *Frank Hines* of the Equipment Shop is home and recovering nicely after a serious illness and nine-week confinement in the hospital.

DIAPER DATA—Congratulations to the *C. F. Pridgens,* whose first son, C. F., Jr., was born June 2nd. Mrs. Pridgen is the former Hazel Brooks of Pine Bluff. Cletis works in the Road Oil Department.

SYMPATHY is extended to the family of *Slade Elbert Little,* Truck Driver, District 1, who died April 28th.

RECENT VISITORS to the Division Office include retired Division Engineer *C. E. Brown,* and former Right of Way stenographer *Irene Worley* and little son Gregory.



J. W. Meadows, Onslow County Maintenance Supervisor, looks on as H. L. Hansley, center, and a prisoner clean up rubbish along the shoulder of the road in conjunction with a recent clean-up program in the city of Jacksonville. G. M. Shepard is the truck driver.

DIVISION FOUR

BY AUDREY L. PERRY

Division Correspondent

GET WELL WISHES are extended to Truck Driver *Tommie Jones,* who has been absent from work for some time while undergoing treatment in Tarboro and at Duke Hospital; and to Mechanic *Bob Lancaster,* who is a patient at McGuire Veterans Hospital, Richmond, Va. Mrs. Leona Willis, wife of Mechanic *Ralph Willis* of Weldon, has returned to her home from a Roanoke Rapids hospital and Nancy Carter, daughter of Maintenance Foreman and Mrs. *J. H. Carter* of Tarboro, is recovering from injuries received in an automobile accident.

WELCOME to Maintenance Supervisor *Paul Fulghum,* who returned to work in June. Bridge Maintenance and Construction Superintendent *J. H. Rosser* has returned to work after having had surgery on his hand. *Willie Reason* of the Sign Department is back on the job following illness. A speedy recovery is wished for *Edgar A. Bryant* of the Sign Department, currently a patient at the Veterans Hospital, Durham.

CONGRATULATIONS to the *James Layton Tarts,* whose son was born May 20. Pop recently came to work in the Right of Way Department.

BEST WISHES are extended to *E. H. Paschall* and his family on their recent transfer to Hillsboro. Good luck to *Kenneth Thomas,* clerk in the Division Office, who resigned to accept a position with Burlington Mills at Rocky Mount. Kenneth was among the 179 students at Atlantic Christian College to receive degrees on May 29th.

A NEW HOME in Jennings Acres, Wilson, is the pride and joy of the *Fred Hettingers.*



J. W. Savage, with his two young granddaughters, celebrated his 60th birthday Easter Sunday. On hand also were his wife, his 83-year-old mother, his two daughters and their families. In addition to the young ladies shown here in their Easter finery, he has five other grandchildren.



A celebration was in order on June 7th, in honor of Division Engineer E. P. Koonce's birthday. The office staff and other personnel snrprised him with a cake and cokes on the lawn of the Division office. Looking on as he cnts the cake are, left to right, front row: Betty Simon, Vernice Benton, Mary Burgess, Mable Askea and Andrey Perry. Back row: Sam Livesay, Don Overman, Withers Davis, Paul Fulghum, Arthur Ferguson, James O. Sellars, Andy Ward and Wade Pridgen.

SYMPATHY is extended to Mrs. *G. T. Wilkins*, wife of our Landscape Supervisor, whose mother died recently.

UNCLE SAM invited a few of his boys down to Fort Bragg for two weeks National Guard Training. Accepting the "invitation" were: Division Right of Way Agent *Gray Lamm*, Road Oil Supervisor *S. F. Holmes*, *Homer Bachelor* and *Jerry Phapps* of the Location Department and *Eugene Proctor* of the Sign Department. And while they were on training, *Joe Brown*, Edgecombe County Sign Erector was enjoying a week's vacation.

LOCATION has two newly-weds. Congratulations to *Bill Robbins* and *Bill Dillon*.

WELCOME BACK to work, Truck Driver *W. M. Whitley* of Halifax County who suffered foot injuries in an accident; Truck Driver *J. R. Payton* of Edgecombe County; Maintenance Foreman *J. C. Morris* of Weldon; and Maintenance Foreman *H. H. Waters* of Tarboro. Others who have been out due to illness are: *H. A. Turner*, *J. W. Savage*, *Willard Daniel* and *V. A. Brown* of Nash County and *Archie Murray*, *John Williams* and *Henry Murray* of Wilson County. Wilson County Maintenance Supervisor *Paul Fulghum* has returned to work following an extended illness.

CONGRATULATIONS to Mr. and Mrs. Edward Sweatt of Weldon, on the birth of a daughter, Wanda Gail, at the Roanoke Rapids Hospital. Mrs. Sweatt is the daughter of Mechanic and Mrs. *Ralph Willis* of Weldon. Wanda is the third daughter for the Sweatts.

BEST WISHES to Tommie Williams, son of Nash County Maintenance Foreman and Mrs. *Z. H. Williams*, who finished his freshman year at the University of North Carolina with honors. He was one of 12 students selected during the last semester for membership in the Society of Janus, honorary society which recognizes industrious leadership and distinctive service to dormitory men on the campus. Tommie was editor of the WINSTONIAN, newspaper for Winston Dormitory.

SYMPATHY is extended to the family of *Van Buren Coker* of Tarboro, who died recently. Formerly a section foreman helper in Edgecombe County, Mr. Coker retired in 1957 on disability.

GOOD LUCK to *W. E. Summerlin* of Edgecombe County, who has taken another job. Wilson County Maintenance regrets the loss of Machine Operator *Floyd Pennington*, who is retiring due to disability.

SGT. JIM COOPER, better known as a Maintenance Yard Assistant, spent two weeks at Fort Bragg on encampment with the National Guard. He's a member of the Roanoke Rapids-Warrenton unit.



Giles Earington Crntcher has been with the Highway Department for 32 years. A native of Granville County, he is presently serving as Road Maintenance Supervisor in the Fifth Division. He and his wife, the former Josephine Burwell, are the parents of two daughters and a son. They make their home at Stovall.



Presenting Denise Joyner, all decked out in her Sunday best. She's the daughter of the H. L. Joyners of 420 Barbour Street, Clayton.

DIVISION FIVE

BY PEGGY BRIGHT

Division Correspondent

A HEARTY WELCOME is extended to *W. D. Moon*, who is now Right of Way Engineer in Durham. Bill became the proud father of a boy on May 4. The Moons also have a four-year old daughter, Jane. Welcome to the District 1 office *Mrs. Ruth F. Curlee*, who formerly worked in the Equipment Department.

LATEST REPORTS from *Frances King*, former steno in the District 1 office, is that life in California is great and that having movie stars as neighbors is the regular thing. She sends regards to all her friends.

EMPLOYEES who took a refresher course in First Aid recently include: *J. E. Aiken*, *M. L. Boyd*, *H. L. Carden*, *L. W. Clay*, *W. M. Cole*, *M A. Ellington*, *J. S. Greenway*, *Sam Grissom*, *J. T. Hart*, *H. L. Henley*, *H. E. Hicks*, *B. O. Hockaday*, *W. A. Laws*, *H B. Royster*, *J. J. Setzer*, *H. S. Whitt*, *R. G. Williams*, *Y. B. Whitt*, *J. D. Williford* and *C. P. Wilson*. *Howard L. Riggan* did the usual good job of instructing, assisted by *W. T. Howell*.

A NEW CAR is the proud possession of *G. J. Brogden*.

DIVISION SIX

BY STEVE AMMONS

Division Correspondent

CONGRATULATIONS to Mr. and Mrs. *Asier Simmons* (Construction Department) on the birth of a son, June 2nd.

GET WELL WISHES go out to Landscape Supervisor *C. H. Sparkman* who underwent surgery in April. We hope he will be able to return to work soon along with Machine Operators *J. A. Allen* and *J. C. Lanier* of Harnett County who were involved in recent accidents. A speedy recovery is wished for *M. W. Bass* and *L. C. Tanner*, who retired recently on disability.

CONDOLENCES to the family of retired Maintenance Supervisor *L. D. Hubbard*, who died recently, as well as to *Perry Dillard* of Columbus County Maintenance, whose wife died May 13th.

DIVISION SEVEN

BY P. L. WELCH

Division Correspondent

WEDDING BELLS rang out May 27th for *Herbert E. Collins*, Construction, who was married to Judy Middleton of Mayodan. They are making their home in Madison and we extend best wishes to this couple.

WELCOME, *John Burton, Jr.*, of Construction, who has moved to Greensboro from Reidsville.



Former Shovel Operator R. D. Lewis has plenty of time to spend with these two charming young ladies now that he is retired. They are his twin granddaughters, Janice Kay and Joan Karol Keistler.

ON SICK LEAVE is Resident Engineer *J. J. Cole, Jr.* We hope he will be feeling better soon. Meanwhile, filling in for him is *E. T. "Oscar" Brame* of Sanford who is taking care of the Hillsboro job while Cole is on leave.

WE HOPE *Helen Pringle*, secretary in the Greensboro District Office, will be able to shed that cast on her left leg by the time you read this.

DIVISION EIGHT

BY VIRGINIA S. WILLIAMSON

Division Correspondent

TEXAS was the destination of *Dexter Hough* when he boarded a plane recently for a visit with his son-in-law and daughter, Capt. and Mrs. Kenneth R. Tesch, and grand-daughter Barbara, stationed at Fort Bliss. He also visited Mexico and many other points of interest on his trip.



These Carthage scouts recently took first place in the Flint and Steel Event at the Scout-O-Rama in Raleigh. Seated, left to right: Bobby Myers, Fred Beck, Jr., and Johnny Stewart. Standing, Byron Hill and Lee Caviness. Resident Engineer F. H. Beck is Scout Master for these boys, having worked with them for two years. There are 38 boys in the troop and at the present time, 30 of them are studying for their God and Country Award.

A GOOD TIME was reported by everyone who attended the annual Shad Bake at Aberdeen. Another enjoyable event was the dinner meeting of the Moore County Chapter of the Employees Association. The meeting was held in Carthage and the menu featured Southern fried chicken, hush puppies, slaw, potato salad and all the 'trimmins' Guests included Mr. and Mrs. Otis Banks. Otis explained the new increment schedule and pay plan as adopted by the Personnel Council.

TEMPORARY employees *Betty Lou McFarland* and *Roy Williams* are welcome additions to our staff for the summer.

OUR LOSS is Winston-Salem's gain. Everyone hated to see *Herman Shaw* leave the Eighth Division, but we wish him the best of luck in his duties as Area Appraiser in Winston-Salem. *Albert Benoist*, Maintenance Yard Assistant at Troy, has resigned to take a job with Burlington Mills at Reidsville.

IT'S A BOY for the *Kenneth Lee Alexanders*. Kenneth is a Moore County Maintenance employee.

BACK AT WORK after spending several days at Moore County Hospital are *Z. V. Tolar* and *H. H. Jordan*.

DIVISION NINE

BY R. B. FITZGERALD

Division Correspondent

THERE WAS FISH by the tub full when *R. W. Nance, J. H. Graham* and *J. D. Schenk* returned from their fishing trip at Kure Beach. The fellows decided that the next time they would wire *R. W. Nance* with lights, for it seems he went flounder gigging alone one night and got lost. We understand he had quite a time getting back to home base! Others planning fishing trips are *R. W. Schenk, F. W. Schenk* and *G. E. Rike*.

THE SPARKLE of a new diamond can be seen these days around the Appraisal Section. Proud possessor is *Alice Watson* who is engaged to Bob Green, a teacher in the Winston-Salem schools.

BEST WISHES to *Mrs. Florence Flup*, stenographer in the Division Office, who resigned recently after 20 years with the Highway Commission. She was replaced by *Mrs. Barbara B. Story*, to whom we extend a word of welcome.

CONGRATULATIONS to James R. Basinger, son of *J. R. Basinger* of the Rowan Maintenance Department, who graduated recently from college and will enter the service soon.

WELCOME BACK, *H. F. Jones*, who has returned to work after being hospitalized.



Audrey Howell, daughter of the J. E. Howells of Route 2, Wadesboro, has completed her freshman year at Appalachian State Teachers College. She is a graduate of Ansonville High School, where she was valedictorian of the class of 1959. Her father is a Motor Grader Operator in Anson County.

DIVISION TEN

BY J. W. JONES

Division Correspondent

GRADUATION exercises at State College in Raleigh were attended by Mr. and Mrs. *J. B. Pridgen.* Their son, Jim, received a degree in forestry.

WE REGRET to report that the home of the *George C. Allens* was completely destroyed by fire recently. To George, his wife and eight children, we send our sympathy.

AN AUTOMOBILE ACCIDENT on April 22, claimed the life of our long-time friend and co-worker, *P. C. Austin,* Maintenance Yard Assistant in Stanly County. He had been with the Highway Commission for over 20 years and will be missed by everyone who knew him. It is with regret that we report the loss of two other long-time employees. *E. K. McGinnis* died of a heart attack suffered while at work. He had been with the Department 17 years. Injuries received in an automobile accident proved fatal to *Hoyle Ridenhour,* who had worked with us for 13 years. We send our condolences to the families of these men, as well as to *C. C. McBryde,* Assistant Division Engineer, whose mother died recently.

DIVISION TWELVE

BY JEAN CLINE

Division Correspondent

AN OUTDOOR SUPPER was enjoyed recently by Right of Way employees at the *Ray Davis* home. The occasion was a farewell party for *Mrs. Joy Cloninger,* who resigned to move to Chapel Hill where her husband will enter the University. Joy will work in the office of the Director of Housing there.

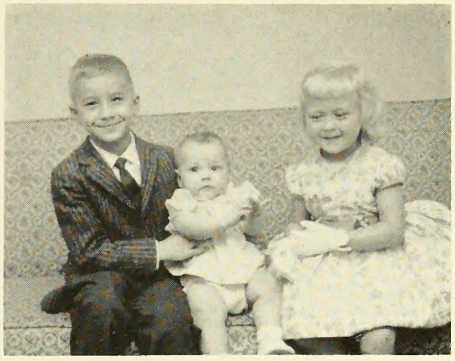
TAKING *Joy's* place is *Brenda Moser,* to whom we extend a hearty welcome!



Mr. and Mrs. W. Brady Martin were married recently in the parsonage of Red Hill Baptist Church. She is the former Dixie Sellers. The newly-weds are making their home at Route 2, Polkton. Mr. Martin is Maintenance Foreman in Anson County.

CONGRATULATIONS to our graduates: Johnny Church, son of District Engineer and Mrs. *J. I. Church* and to Clyde Richard Poston, son of Sign Supervisor and Mrs. *Clyde G. Poston, Jr.* Both are recent graduates of Shelby High School. District Engineer *P. D. Miller* was in Raleigh for two college graduations. His son John Aubrey graduated at State while John's wife, Ann, graduated at Meredith. Maintenance Foreman and Mrs. *P. J. Corpening* have a graduate in their family too. Their son recently received a degree in ceramics at Clemson College. Our congratulations to all the graduates.

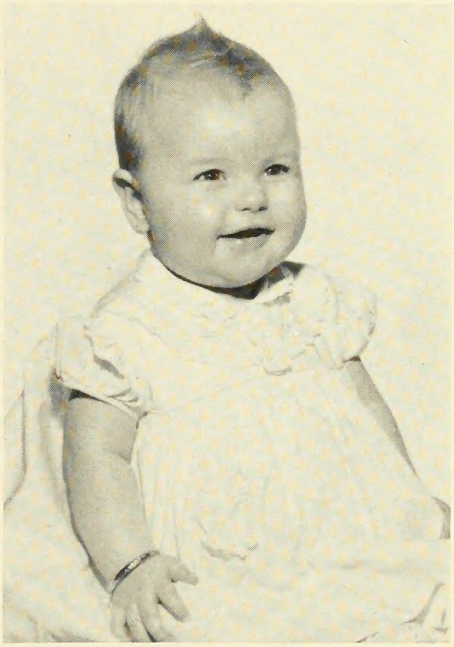
ANOTHER HONOR has come to Joyce Carroll Murdock, granddaughter of Area Foreman *J. B. Murdock.* Joyce won an $850 Elbridge A. Stuart Scholarship, which she will use in her studies at Appalachian State Teachers College next year. She's the daughter of the Oswald Murdocks of Troutman.



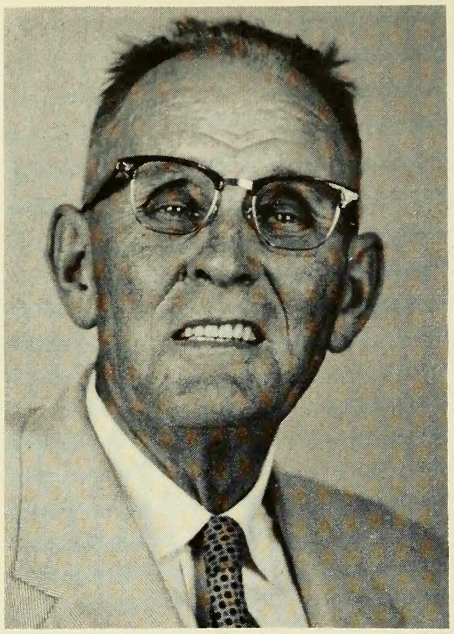
These fine-looking youngsters are members of the T. G. Brooks family. That's eight-year-old Kenneth, holding Norma, who is 7 months old, and Susan, age 4, on the right. Daddy is Office Engineer in the Twelfth Division.

SYMPATHY is extended to the family of *A. M. Aiken* who died recently at his Statesville home. "Shorty" was a long time employee in District 2 and retired several years ago.

GOOD NEWS is that *S. B. Brinkley,* former Road Oil Supervisor, now retired is recovering nicely from a recent operation. Others on the sick list include: *J. T. Stikeleather's* son James Jr.; Mrs. *C. S. Honeycutt;* Daniel, son of *C. D. Jen-*



This cupie doll is Amy Jean Cline, charming daughter of the Ambrose Clines of Shelby. Amy Jean was born September 30, 1959. Mama Jean is Division Correspondent for the Twelfth Division, in addition to her secretarial duties in the Division Office.



Marvin Clark is enjoying his retirement at his Moravian Falls home these days, but says he also enjoyed all the time he spent working with the Highway Department prior to his retirement last year. Clark began road work in Wilkes County in 1917, later being employed by the State when the roads were taken over for maintenance. He operated motor graders, shovels, supervised prison crews on maintenance work, and was in charge of building sections of roads in Alleghany and Watauga Counties. He is married to the former Maude Reavis and they have two daughters and a grandson.

kins, Mrs. *V. B. Reavis*, *Tom Cherry's* son, *J. W. Fox*, *J. R. Robinson's* son Larry and *E. B. Ford*. Welcome back to work, *J. W. Earp*, after an extended illness.

LOOKING for Area Foreman *Ivey Curlee*? He can be found most any week-end at one of the nicest cabins on Lake Hickory.

IT'S A BOY for the *F. W. Johnsons* of Alexander County. The new arrival was born April 25.

RESIDENT ENGINEER *K. E. Mauney* spent two weeks on duty with Uncle Sam at National Guard Encampment, Fort Bragg. Vacationers include Resident Engineer and Mrs. *W. A. McNeill*, who spent a week visiting relatives in Georgia. The *J. B. Murdocks* report a fine trip to Cape Cod, where they visited a son and his family. *Lois Knox* was seen welcoming her sister, who is home from Germany after four years with the Army as librarian in schools for dependents.

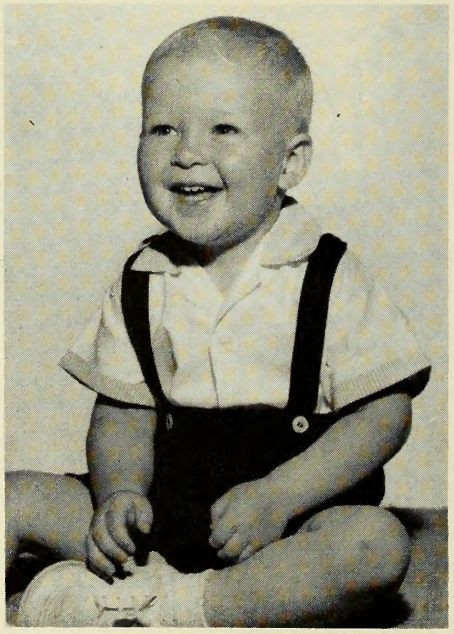
A NEW member of the Construction Department in Shelby is *Hal Gardner*, temporary engineering aide.

DIVISION THIRTEEN

BY DAN TURNER

Division Correspondent

VACATION TIME is upon us and many of our people are enjoying vacations as you read this. *The Paul Robinsons* of Asheville enjoyed the sun and surf at Daytona Beach, Fla., recently, while Mr. and Mrs. *Bronson Monteith* of Marion spent a week visiting in Indiana. Maintenance Supervisor *H. D. Aiken* and family enjoyed a West Coast trip.

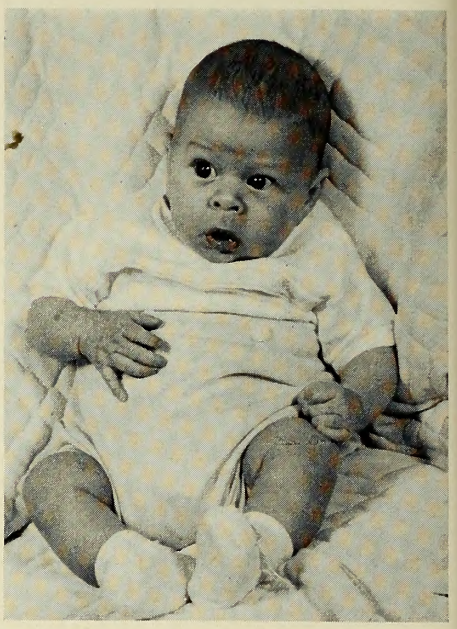


Joey Davis displays his delight at the thought of his second birthday, just around the corner on July 9. Joe's dad is employed in the Right of Way Department in Division 12.

GOOD LUCK to *Wayne Morris* of Marion who resigned recently to take another job.

BACK AT WORK after absences due to illness are: *B. S. Connelly*, District Engineer, injured in an automobile accident in February; *J. T. Knight*, Assistant Division Engineer, who has been out since January; and *Melba Bradley* of the District Office, who was hospitalized for a short time. *Vance Proffitt* and *H. Page Hunter*, Yancey County Maintenance Foremen, have been out due to illness.

SYMPATHY is extended to Sign Supervisor *C. P. Reeves*, whose father died recently.



The Dewitt Greens are proud grandparents these days, and the reason is young Bobby Allen Widenhouse, who was two months old when this picture was made.

DIVISION FOURTEEN

BY D. V. RAXTER

Division Correspondent

A COFFEE HOUR honored *Christine Bryson*, stenographer in the Division office. Hostesses Mrs. *F. L. Hutchison*, Mrs. *A. J. Hughes* and Mrs. *D. V. Raxter*, presented Christine with a gift of silver. She and William O. Sutton were married June 18.

NEW EMPLOYEES in the Division office include Mrs. *Fred Holcombe*, who replaces Christine Bryson Sutton; *Harold Thompson*, staff engineer and *K. R. Harrod*, college trainee in the Right of Way Department.

A SPEEDY RECOVERY is wished for *J. W. Pittillo*, Road Maintenance Supervisor, who recently underwent surgery. *Robert R. West*, Polk County employee, has returned to work after a lengthy illness.

VACATIONERS include the *T. M. Austells*, who spent a week at Cherry Grove Beach; and Maintenance Yard Assistant *R. C. Whiteside*, who visited his daughter and family in Colorado.

WORKING with *T. M. Austell* is *J. H. Medlin*, graduate trainee.

Available Federal Aid

Funds To NC Increased

North Carolina comes in for a sizable increase in the total amount of Federal Aid Funds which can be committed to contract during the coming fiscal year as contrasted with the last fiscal year, according to an announcement last month from Washington.

In a release from Washington, Commerce Secretary Frederick H. Mueller said North Carolina will have available a total of $52,574,000 in Federal Aid for contract lettings during fiscal 1960-61 as opposed to $40,052,000 which has been available during the current fiscal year.

Contract controls were imposed last fall by the U. S. Bureau of Public Roads when it became apparent that the Federal Highway Trust Fund receipts were not actually matching expenditures by the various States. To keep the various Federal Aid highway programs on a "pay as you go basis", the Bureau of Public Roads placed a limitation on the amount of State committments which could be honored in Washington.

During the current fiscal year the Federal roads agency said it would guarantee reimbursement on expenditures which did not exceed $40,052,000 (Federal share). Now, because of increased Trust Fund receipts, the reimbursable limit is raised to $52,574,000.

Secretary Mueller said the increased revenue was brought about by the addition of another one-cent on the Federal gasoline tax. It is now 4¢ per gallon.

Highway Director W. F. Babcock said in Raleigh when the announcement was released that North Carolina will be able to speed up its contract letting by some 25-30 percent. A great many major projects which had been delayed for six to twelve months may be let to contract much earlier now that the contract control regulations have been eased somewhat and more Federal funds are available for expenditure.

Under the new reimbursable obligation schedule North Carolina will have available $19,935,000 for ABC projects (Federal Aid Primary, Secondary and Urban) and $32,639,000 for Federal Aid Interstate. The total of $52,574,000 will become available to the State on equal quarterly installments of $13,144,000.

Highway officials emphasized that the increased availability is not actually an increase in allocation. Such allocations to the various States are made on the basis of a formula adopted by Congress.

"It is merely a welcome indication that the Highway Trust Fund is now more solvent and North Carolina will be able to incur obligations against her allocation at a faster rate," said Babcock.

The announcement of more fund availabilities came as not particular surprise to highway officials. When contract controls were imposed last fall as a result of Trust Fund shortages, Federal officials said they would take another look at the revenue picture in the Spring. It has been known for some time that the additional one-cent gasoline tax was having a definite strengthening effect on Federal highway funds and each State's spending allowance was apt to be increased.

Federal officials said they would continue to analyze revenues and predicted receipts from highway user taxation and such reviews may cause further changes in the guaranteed reimbursable credits of the States.

Right-of-Way

(Continued from page 7)

more in line with the competent appraisal.

The new law on condemnation may result in a larger volume of court cases since the Commission has no alternative but to file such cases if it cannot otherwise reach a suitable agreement with the property owner. But, again, the filing of such suits does not eliminate possible negotiations while, at the same time, it provides a source of ready cash to the really needy property owner who may find himself in financial straits as a result of the quick need for a highway improvement to be started.

All in all, it appears to be another step in the direction of fairer treatment to the fellow who finds, through no fault of his own, that his property is needed for a new road. At the same time, while it involves a great deal more trouble for the Attorney General's staff representing the Highway Commission, the new Statute places right-of-way acquisition in its proper light—a serious, costly and important phase of the Commission's effort to provide better roads for all the people while playing as fair and square as possible with the property owner who may have to give way to the need for progressive highway development.

NC Road System Leads

Way With 71,344 Miles

North Carolina's ever-growing State Highway System topped the 71,000 mile mark this year as the State continues its record of having the largest State-maintained road network in America.

The new mileage total is 71,344, a gain of 474 miles over last year. Most of the increase, 356 miles, was on the rural Secondary Road System. The rural State Highway System (NC-US numbered routes) grew by 38 miles, while the extensions of these routes into urban areas also increased by 38 miles. Secondary Roads in urban areas, added since last year, came to a total of 42 miles.

While 68,500 miles of the State Highway System is in rural areas, the State Highway Commission is responsible for 2,844 miles of city or town streets. That's more mileage than the sixteen largest North Carolina municipalities have in their entire street system. Put another way, the State Highway Commission is responsible for about one-third of the total street mileage in all of North Carolina.

The new figures show that all but 85 miles of the Primary Highway System are hardsurfaced. A few stretches of lightly traveled Primary Roads in mountainous areas are not as yet paved. By contrast, only two miles of Primary Highways inside municipalities remain unpaved.

Approximately 54% of all North Carolina public highways, (38,505 miles) are hardsurfaced.

North Carolina is one of only four States in the Union which has maintenance responsibilities for all public highways in rural areas. The other States with similar authority are Virginia, West Virginia and Pennsylvania. The State of North Carolina assumed responsibility for all Secondary or county roads in 1933, immediately adding some 45,000 miles to its total highway system.

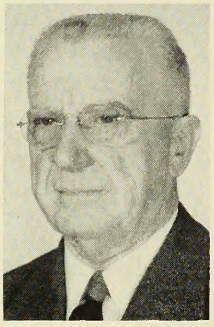
Greece has recently opened a toll road between Larissa and Katerini. This is only the second toll road in Europe—the other is in Italy.

4 Old-Timers Among Retiring Employees

Four long-time highway employees in the Raleigh office are among the more than 40 highway people to retire this year.

They are: B. W. Davis, State Maintenance Engineer, veteran of 40 years service with the Commission; Cartographer L. Polk Denmark; Bridge Maintenance Engineer C. B. "Buck" Taylor, another 40-year man and Compensation Officer H. K. Witherspoon, who has served the Commission for 41 years.

B. W. Davis, a native of Macon, Georgia, joined the Commission in 1920, after working for the Georgia Southern and Florida Railway and serving a two-year hitch in the Army, stationed in France. He has served in the following capacities during the 40 years he has been with the Commission: Resident Engineer, Assistant Division Engineer, County Engineer, State Equipment Engineer, and Chief Equipment Engineer. He was named State Maintenance Engineer in 1954.



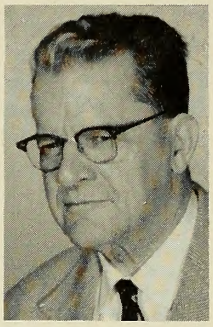
Davis

He is a former president of the North Carolina Society of Engineers, as well as the Raleigh Engineers Club, and served as secretary - treasurer of the Southeastern Association of State Highway Officials. He has also served as a member of the Maintenance Panel of the American Association of State Highway Officials Road Test and as a member of the Highway Research Board Maintenance Department.

Davis is married to the former Margaret Newell of Rocky Mount and they have one daughter.

A native of Raleigh, L. Polk Denmark first joined the Highway Commission Roadway Department in 1919, after serving overseas during World War I. Later he left, working for a time in the office of the Secretary of State, and also as Alumni Secretary at State College. In 1937, Mr. Denmark returned to highway work, as chief draftsman in the newly-organized Division of Statistics and Planning, where he remained until his retirement.

Denmark has been quite active in Scouting, and in 1912, helped organize the first Boy Scout troop in Raleigh. He holds the Silver Beaver award from the Occoneechee Council.



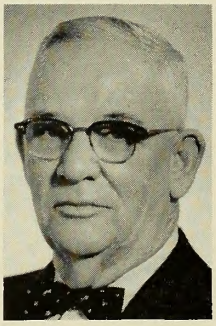
Denmark

He has served on the Board of the Hayes Barton Baptist Church for about 25 years and is a past chairman of the Board.

An active Mason, Mr. Denmark has served as Master of the William G. Hill Lodge, Carl A. Woodruff Lodge of Perfection and John C. Drewry Chapter Rose Croix Scottish Rite Bodies. He has been awarded the rank of Knight Commander of the Court of Honor, by the Supreme Council Scottish Rite of the Southern Jurisdiction.

During his early days with the Highway Commission, Denmark made the first State map, showing the proposed highway system linking all county seats. The map was made a part of the legislative act of 1921, authorizing the first $50,000,000 road bond issue.

He is married to the former Annie B. Stainback of Raleigh and they have one daughter. In his retirement, Mr. Denmark plans to "catch up" on his fishing and water color painting.



Taylor

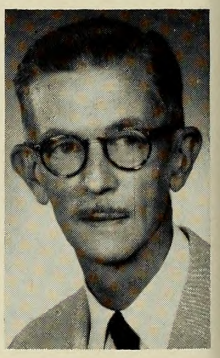
"Buck" Taylor winds up 40 years service with the Highway Commission. A native of Oxford, he came with the Commission in 1920 as a draftsman and bridge designer. He later served as resident engineer on the Swift Island Bridge over the Pee Dee River near Albemarle and in 1922 was named construction engineer on bridge location and surveys. A year later, he became construction engineer on bridges under contract and was elevated to the post of Bridge Maintenance Engineer in 1926.

Taylor's hobby is making antique furniture reproductions and he has turned out many fine pieces of furniture in his basement workshop. In addition to building furniture, he also enjoys stamp-collecting, specializing in "First Day of Issue" stamps and covers.

He is married to the former Theodora Anderson and they have two sons.

H. K. Witherspoon is retiring as Compensation Officer after 41 years with the Commission.

"Skin," as he is known by many of his friends, is a native of Hillsboro, and joined the Commission in 1919. He first had charge of the drafting room and later held positions of Project Engineer, Engineer of Publications and Statistics and Assistant to three highway chairmen prior to his duties as Compensation Officer which he assumed more than 20 years ago.



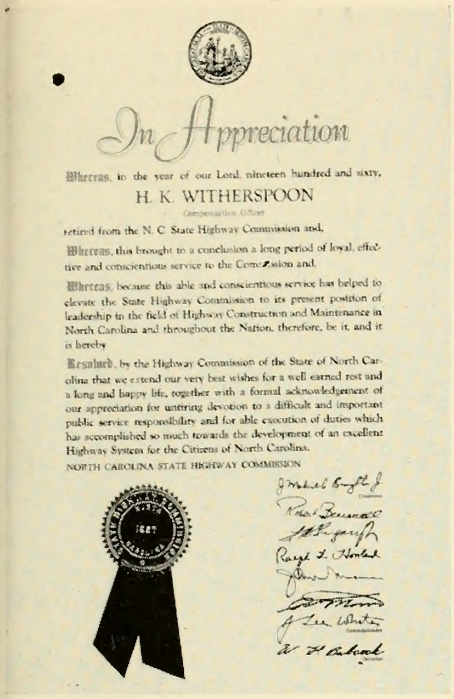
Witherspoon

An avid camera bug, Mr. Witherspoon has a large color slide collection of the many varieties of iris which bloom in his garden each spring. In addition to photograph, he also enjoys hunting, fishing, and taxidermy, and is a past president of the Raleigh Ice Skating Club.

Mr. Witherspoon is a past president of the Raleigh Lions Club and the Occoneechee Council, Boy Scouts of America.

His wife is the former Grace Bunn of Spring Hope and they have two children.

Other Commission employees who are retiring this year are: E. R. White, Machine Operator; Bennie C. West, Maintenance Foreman; James D. LeGwin, Highway Engineer; Henry T. Wooten, Maintenance Foreman; James A. Deaton, Maintenance Foreman; Nathan J. Evans, Truck Driver; Ralph W. Kinlaw, Highway Inspector; R. McKeithan, Road Maintenance Supervisor; J. M. Morton, Road Maintenance Supervisor; Herbert L. Norris, Truck Driver; Jesse M. Pegram, Laborer; Charles S. Nixon, Truck Driver; Rufus G. Pennell, Machine Operator; George T. Upchurch, Truck Driver; C. R. Whittington, Maintenance Foreman; John B. Williams, Truck Driver;



In Appreciation

Whereas, in the year of our Lord, nineteen hundred and sixty,

H. K. WITHERSPOON

Construction Officer

retired from the N. C. State Highway Commission and,

Whereas, this brought to a conclusion a long period of loyal, effective and conscientious service to the Commission and,

Whereas, because this able and conscientious service has helped to elevate the State Highway Commission to its present position of leadership in the field of Highway Construction and Maintenance in North Carolina and throughout the Nation, therefore, be it, and it is hereby

Resolved, by the Highway Commission of the State of North Carolina that we extend our very best wishes for a well earned rest and a long and happy life, together with a formal acknowledgement of our appreciation for untiring devotion to a difficult and important public service responsibility and for able execution of duties which has accomplished so much towards the development of an excellent Highway System for the Citizens of North Carolina.

NORTH CAROLINA STATE HIGHWAY COMMISSION

Certificates are being presented to each person who retires this year. The certificate, approximately 11 by 17 inches, is printed in black and gold, with the employee's name inscribed in black. Signatures of Director Babcock, Chairman Broughton, and the Highway Commissioners are affixed, and the certificate bears the Highway Department's gold seal, as well as the State seal.

Claud D. Baird, Truck Driver; Ulus V. Brown; Maintenance Yard Tradesman; Ed F. Hunter, Maintenance Foreman; Roy Kanipe, Highway Engineer; Jeter E. McDowell, Maintenance Foreman; Sam Barnett, Maintenance Foreman; Walter L. Bryson, Truck Driver; Thomas J. King, Machine Operator; Mack Patterson, Machine Operator; Cyrus T. Jarman, Bridge Maintenance Foreman; Harry D. Wannamaker, Bridge Maintenance Foreman; George J. Moore, Mechanic; Craig Harrell, Mechanic; Louis F. Waters, Mechanic Foreman; Freddie Poe, Welder; Henry M. Fuller, Mechanic; W. W. Falkner, Mechanic; Harmond M. Hubbard, Automotive Serviceman; Samuel F. Barnhardt, Mechanic; F. D. Cobb, Mechanic; R. S. Clifton, Traffic Recorder.

The recently opened Narrows Bridge in Perth, Australia is the largest precast prestressed concrete continuous beam bridge in the world.

The caravan made its way over the dusty desert. Two camels trudged along slowly side by side. Finally, one of them turned around furtively and spoke:

"I don't care what anyone says," he whispered, "I'm thirsty."



Charles P. Taylor, second from right, receives his "Oscar" from Luther M. Cromartie. Others in picture, J. T. Outlaw, left, Executive Vice President of the North Carolina Motor Carriers Association, and Division Engineer Charles Snell, right.

Contract Construction Tops $200 Million In 3 Years

Almost $210,000,000 was poured into contract highway construction in the past three fiscal years, according to a report released recently.

Between July 1, 1957 and the present time, contract construction involved approximately $210,000,000, including contractors' low bids, right of way estimates and engineering costs. During the period, calendar year 1958 was the largest construction year in North Carolina history with a total of slightly over $86,000,000 let to contract.

Much of the total involved Interstate highway projects which are now nearing completion and will be open to traffic this fall. Major projects slated for opening this year include Interstate 85, from the Virginia line to Henderson and from Effland to Greensboro. Traffic was placed on I-95 from Kenly to Benson this summer and the section from Dunn to Eastover in Cumberland County is being readied for traffic now.

One of the longest sections scheduled for early completion is the I-40 link between Hildebran and the Burke-McDowell County line.

Safe Driving Award Presented To Taylor

Truck Driver Charles P. Taylor of Kinston received his "Oscar" award for safe driving at the May 25th meeting of the Highway Commission.

Making the presentation of the gold trophy was Luther M. Cromartie, President of the North Carolina Motor Carriers Association. Speaking on behalf of the trucking industry, Cromartie lauded Taylor for his safe-driving record, pointing out that "to accomplish the feat of driving more than the equivalent of 18 times around the world in the last 10 years is certainly a most remarkable consistent, high performance, safe truck driving record. You are to be commended and the State Highway Commission, I am sure, is pleased to count you as one of their most dependable employees," he said.

Taylor received the Driver of the Month award for driving more than 10 years and 450,000 miles without an accident of any kind.

Peru is working on a national road with 80 miles of it above 12,000 feet in the Andes.



The grade separation on Raleigh's Downtown Boulevard, busiest street in North Carolina, is rapidly taking shape. Contractor for the job is Butler Brothers Construction Company, of Greensboro, whose bid on the work was $231,403.76.

Contract Let For Fontana Lake Road

The contract for construction of a portion of Fontana Lake Road in the Great Smoky Mountains National Park has been awarded to W. B. Dillard Construction Co., of Sylva, according to Conrad L. Wirth of Washington, director of the National Park Service.

Plans call for constructing the road from near Bryson City to Fontana Lake Road, by way of Goldmine Branch. In addition to the road, a marina and picnic sites will be provided on the shore of the lake.

Dillard will handle the work for grading, draining, base course and paving with bituminous surface treatment on 2½ miles of the 7½ mile road.

This new section will link with a road which the State Highway Commission built from Bryson City, east to the boundary of the park. This fulfilled a long-time agreement with Swain County officials to build the road. The contract for the 3-mile section built by the State was let in December 1957, and the cost for grading and surfacing was $519,-610.00.

Wirth added that the second segment of the road would be built next year with funds already appropriated by Congress and the third section is expected to be put to contract in 1962.

Traffic Scholarship Approved By Commission

The Commission has given its approval to a recommendation to send a qualified engineer to Yale University on a nine month traffic scholarship.

Under the plan, an employee of the Highway Department who has already obtained a degree in civil engineering, may be recommended by the State Traffic Engineer and later approved by the Director for fellowship training in traffic engineering at Yale. The fellowship would last for nine months, and the recipient would be given an amount equal to the difference in his present salary and the amount of the fellowship or scholarship which is granted.

Funds Are Approved For Continuation Of Research Projects

At its May 25th meeting, the Commission appropriated $100,000 for continuation of its cooperative road research program with State College and the Bureau of Public Roads.

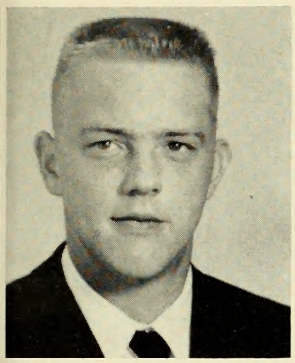
The cooperative research program is now moving into its third year. During the first two years, assistance through the program was given to 29 candidates for advanced degrees at State College, as well as some 20 undergraduate students in civil engineering. The eleven projects are under the direct supervision of nine faculty members at the college.

The projects are: soil stabilization methods for minimizing the effects of frost action on paved and unpaved roads; the effect of intensive commercial roadside development on traffic operations in North Carolina; the impact of industrial growth on traffic generation in rural areas of North Carolina; the measurement of soil moisture and density in highway construction utilizing nuclear radiation; the wheel load distribution and structural behavior of prestressed concrete channel bridges for secondary roads; the simulation on a digital computer of rural highway configurations and the movement of traffic; the effect of mixing temperature on hardening of asphaltic binder in hot bituminous concrete under stated conditions; the utilization of plant growth control substances in the maintenance of highway rights-of-way and highway facilities, a translation of the results of the American Association of State Highway Officials road test to useful guides for design in North Carolina; the impact of controlled-access highways on land use, land value and traffic operations; and the effectiveness of diaphrams in steel stringer bridges.

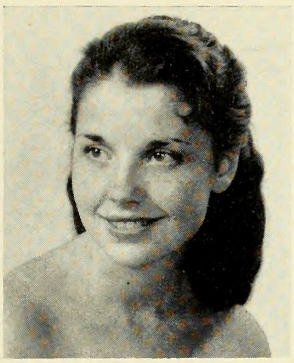
A 25-mile long secret road has been discovered in Brazil. It was built by smugglers to move brazilian coffee into Paraguay.

By using two mixers British contractors laying 26' wide paving on the new St. Albans By-pass established a new British record of 1320 lineal feet day.

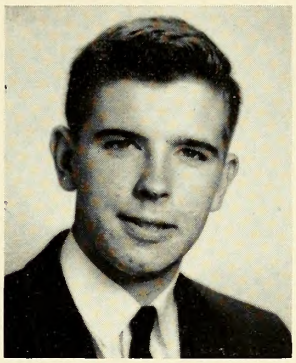
1960 Graduates



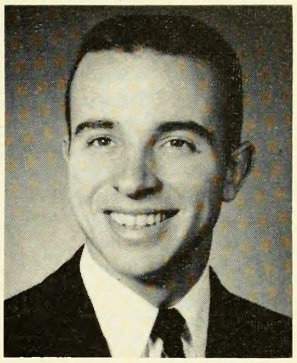
Worth B. Askew, Jr., son of Maintenance Foreman and Mrs. Askew of Ahoskie, Rt. 2, graduate of Ahoskie High School.



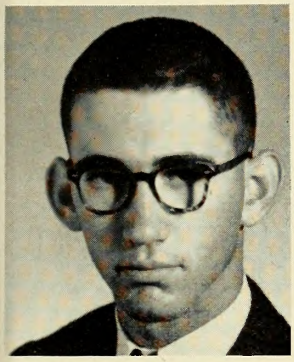
Margaret R. Bunch, daughter of Maintenance Supervisor and Mrs. R. C. Bunch, graduate of Elizabeth City High School.



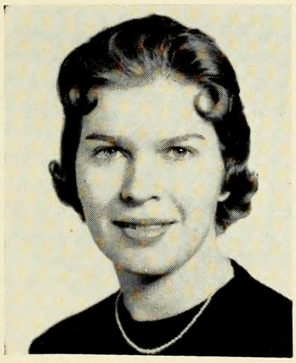
William A. Carter, Jr., son of Randolph County Maintenance Supervisor, honor graduate of Asheboro High School.



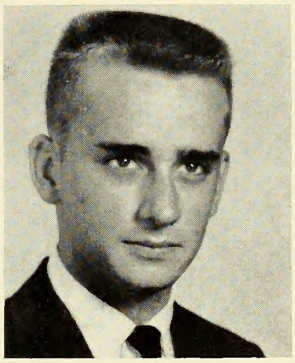
Aubrey T. Davis, son of Equipment Superintendent and Mrs. W. J. Davis of Hertford, chemical engineering graduate of State College.



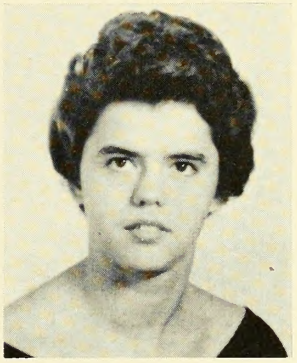
James C. Hofler, son of Area Foreman and Mrs. C. C. Hofler, graduate of Sunbury High School, and winner of Henrietta J. Freeman Scholarship.



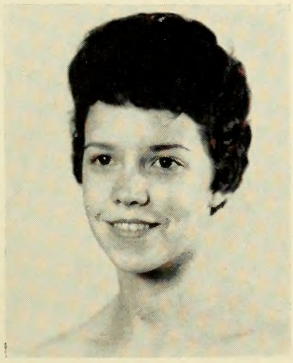
Betty Marie Keel, daughter of Supervisor and Mrs. David Keel of Williamston, graduate of Chowan College.



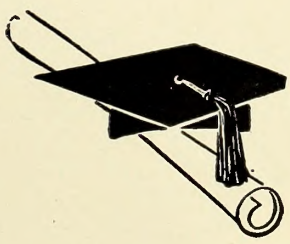
Jerry Lindsay, son of Sign Supervisor and Mrs. Eugene Lindsay, graduate of Ahoskie High School.

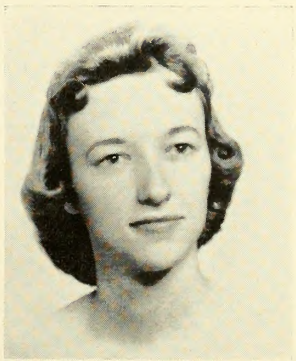


LaVene Pritchard, daughter of Maintenance Foreman and Mrs. Julian E. Pritchard, graduate of Ahoskie High School.



Judy Lee Shuping, daughter of Mr. and Mrs. Joe Shuping, Salisbury, graduate of Boyden High Shcool.





Mary Frances Trexler, daughter of Carl Trexler (Rowan Bridge Maintenance) and Mrs. Trexler, graduate of Appalachian State Teachers College.

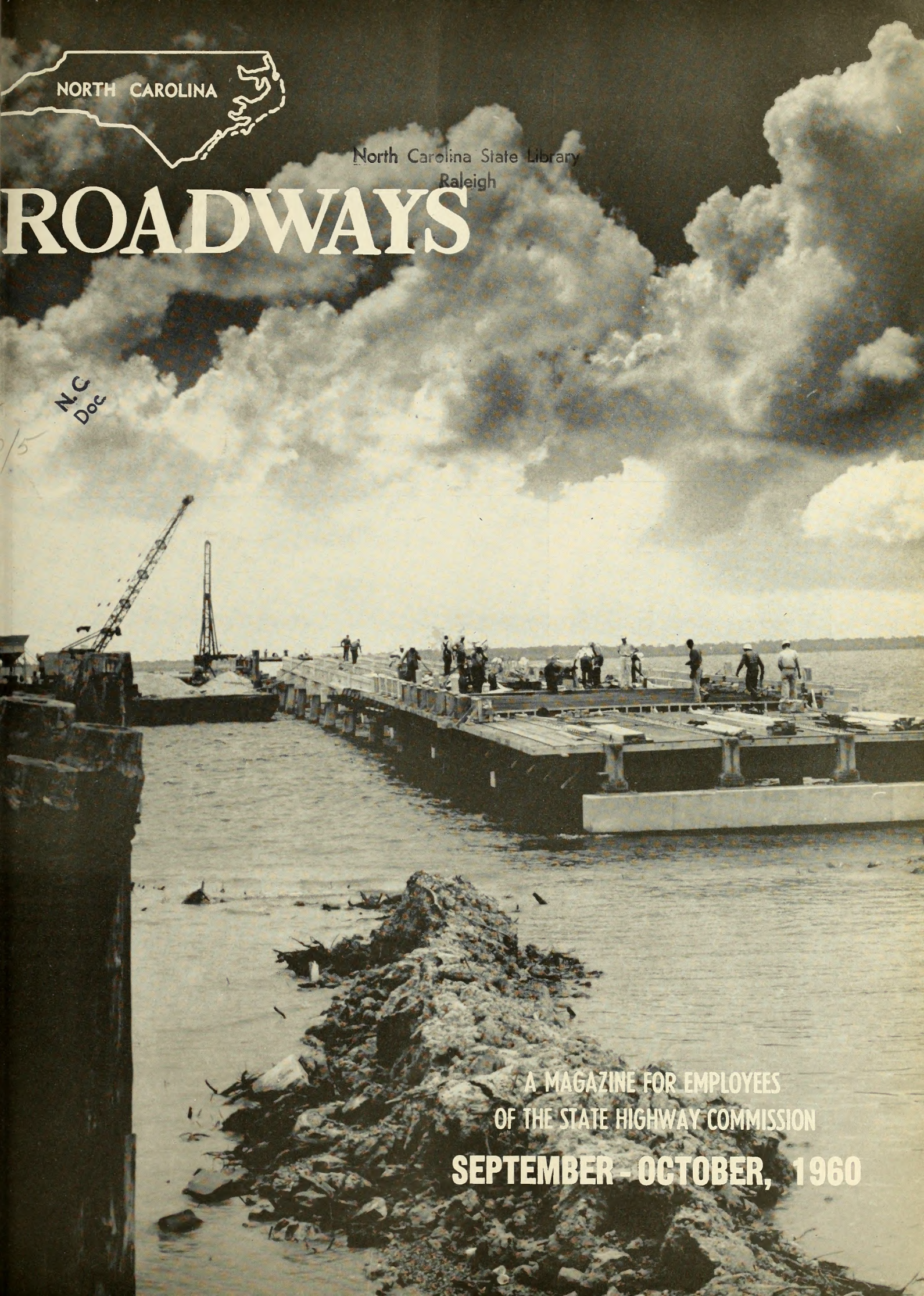


Typical of the many construction projects underway at the present time in North Carolina is this paving project on Interstate 85, from the Virginia line to Henderson. The project, 18 miles in length, is the longest underway at the present time and paving will be completed in about 60 days. Nello L. Teer Co., of Durham, has the paving contract at a cost of $3,828,690. Resident Engineer on the project is H. E. Shaw.

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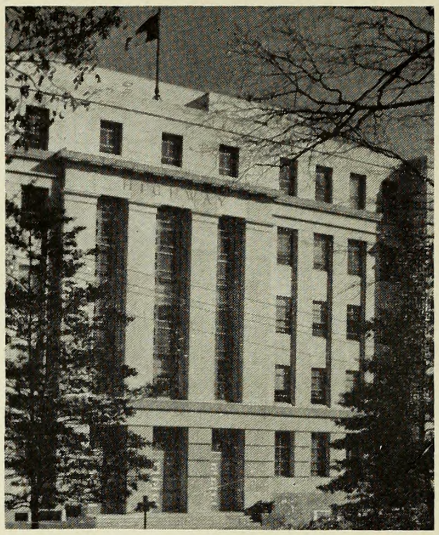
ROADWAYS

N.C. Doc

A MAGAZINE FOR EMPLOYEES
OF THE STATE HIGHWAY COMMISSION

SEPTEMBER - OCTOBER, 1960

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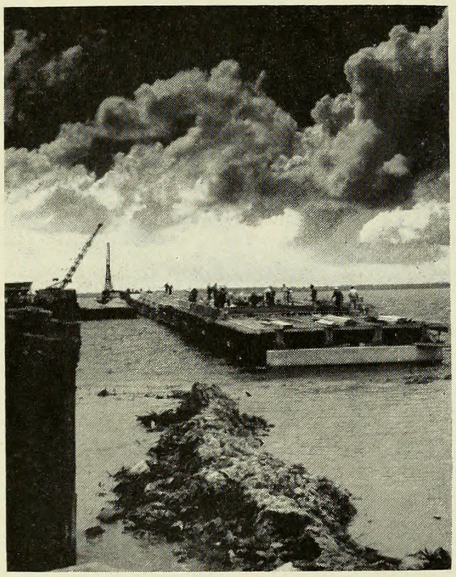
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Stanley S. Betts ..... James W. Mason
Robert Bunnelle ..... R. T. Morris
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W. F. Babcock ..... Director of Highways

The Cover

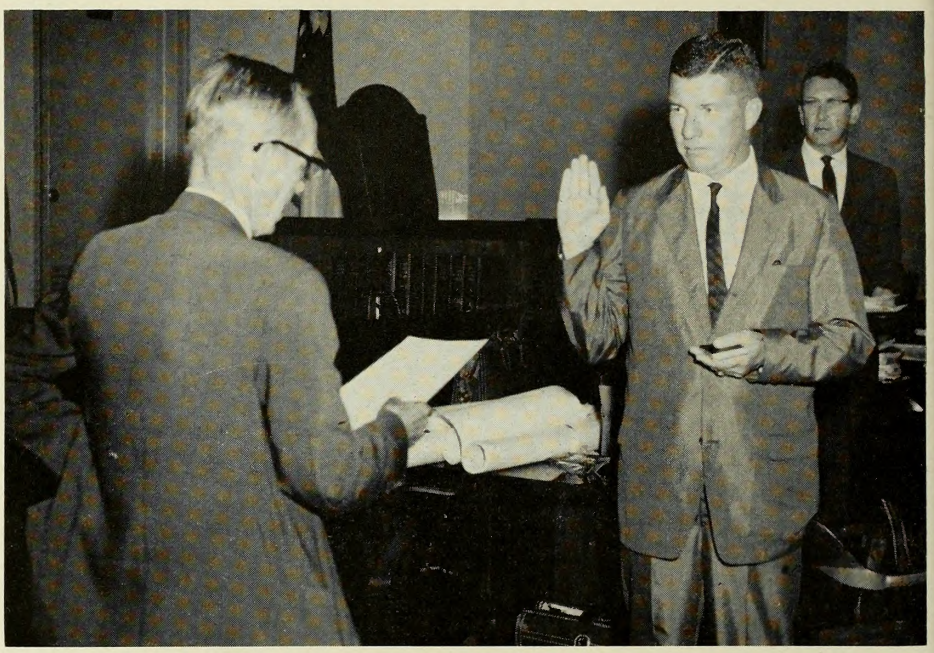


Our cover shows a small portion of the work underway at Sandy Point, where construction of the Alligator River Bridge is in progress.

For a complete story on the bridge, which, when completed in 1962, will eliminate ferry service across the river, turn to page 5. (Photo by H. L. Powell)

The feature article is devoted to a review of the recently-released 15-year highway needs study, beginning on the following page. Editorial comments on the needs study are reprinted on page 21.

See inside back cover for picture and story on road damage left in the wake of Hurricane Donna.



Newly-appointed Highway Commissioner Stanley S. Betts takes the oath of office as Chairman J. M. Broughton, Jr., looks on.

Henderson Man Named To Commission

A man who grew up in highway circles has been named to the Highway Commission succeeding Fletcher H. Gregory, Jr., of Weldon.

He is Stanley S. Betts of Henderson, son of former Division Engineer T. T. Betts of the old Third Highway Division at Fayetteville. The new highway commissioner's father worked for the Highway Department for over 25 years. (He and his wife live at 101 Magnolia Avenue in Fayetteville.)

Commissioner Betts, who is manager of Bowers & Burrows Oil Company in Henderson, attended the Fayetteville Public Schools and graduated from The Citadel, with a degree in civil engineering. Perhaps the only licensed engineer ever named to the roads body, Betts is a former pupil of Highway Director W. F. Babcock. He studied astronomy under Babcock at N. C. State College in Raleigh.

Betts is a Rotarian, a director of the Henderson Chamber of Commerce, a member of the N. C. Oil Jobbers Association, the Henderson Country Club and served as president of the E. M. Rollins School PTA last year in Henderson.

(Continued on page 6)

15-Year Needs Study Presented To Commission

Highway Commission Needs Are Set At $2,417,500,000

The most comprehensive Highway Needs Study ever prepared in North Carolina was presented to the Highway Commission at its August meeting in Mt. Airy.

Prepared and submitted to the Commission by Highway Director W. F. Babcock and his staff, the report analyses road needs throughout the State for the next 15-year period and recommends over 1000 individual improvement projects which when combined with maintenance and operational costs, would cost some $2,417,500,000.

Anticipated revenues with the present State Highway Fund structures plus Federal Aid will amount to $1,912,500,000 for the 15-year period. Total deficiency of funds for the same period would be $505,000,000 or $33,600,000 annually between now and 1975.

The study analyses the responsibility of the North Carolina Highway Commission in relation to all other State Highway Departments in the Nation. The report points out that while North Carolina has 10.50% of all State-administered road mileage in the Nation, it operates on only 3.50% of the State Funds of all Highway Departments.

It was also pointed out that North Carolina's Highway Commission has responsibility for all Secondary Roads, while in most States, these roads are administered and financed by the counties through county property taxes or gasoline tax refunds.

It was recommended, that the Commission retain the responsibility for Secondary Roads "to develop a better coordinated rural road system and prevent costly duplication of services in the 100 counties."

The study stressed the need for adequate advance planning in the development of an efficient, coordinated Highway System for North Carolina.

The study lists the following tangible benefits which may be derived from long-range planning function:

1. Assurance that each improvement project will fit in its proper place in the overall concept of the facility, eliminating duplication and avoiding costly reconstruction shortly after project completion.

2. Right of way purchases may be made well in advance of proposed projects, at times when land is undeveloped and much lower in cost.

3. Officials of industry, business, agriculture, area and regional development and municipalities may plan their own development with knowledge of contemplated highway improvements.

4. Establishes a base for more rational determination of financial requirements and budgeting year by year.

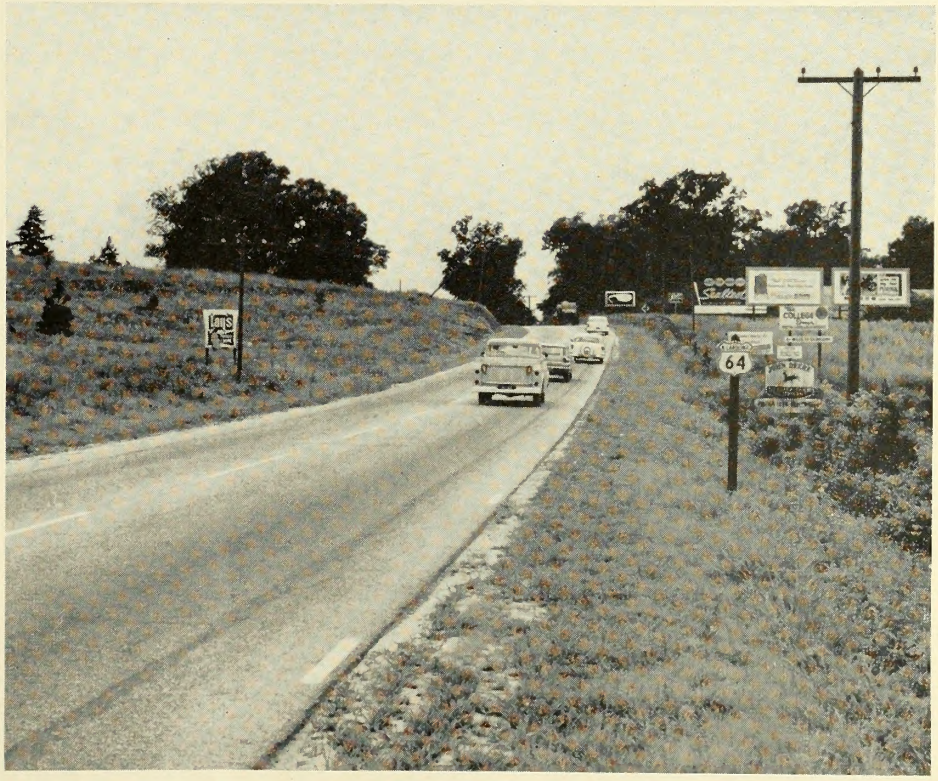
5. And finally, provides for the people of North Carolina the best possible transportation service at lowest cost.

The Philosophy of the Long-Range Highway Plan

This report is predicated upon the basic concept that transportation service should be defined in terms of service levels and that these levels of service should vary among the several Highway Systems in direct proportion to the present and anticipated traffic volumes, land development, and the economic, social, and population trends as they may be seen to evolve over the next 15-year period. Also considered is the type of traffic using the facility; that is, whether the traffic is local, inter-city, intra-state or regional, whether it is by-passable traffic and whether it is private or commercial.

The first step in determining highway needs was the establishment of five basic Highway Systems. These five systems form the framework for this report and its recommendations.

The Primary Highway System (US-NC) was divided into three groupings.



A good example of inadequate facilities on the Trunk Line is this section of US 64 near Raleigh. The Commission has already approved four-laning of this and many other sections of the Trunk System and design work is underway.

These are the Trunk Highway System (including Interstate), the Trunk Feeder Highway System, and the Rural Collector Highway System. Two other groupings are classified as the Rural Secondary Road System and the Urban Street and Highway System.

Trunk Highway System

The Trunk Highway System is defined as a coordinated, continuous intra-state network of major primary routes connecting centers of high economic, population, and recreational importance within the State and connecting with routes to similar centers in adjoining States. The Trunk System's main purpose is to move large volumes of through inter-state traffic, through intra-state traffic and major volumes of inter-city traffic. The Trunk System consists of 3,000 miles of roads including the Interstate System, and needs for Trunk System highways during the next 15 years have been set at $721,500,000.

Trunk Feeder Highway System

Trunk Feeders have been defined as those roads interconnecting centers of generally less economic and recreational importance and smaller towns. The Trunk Feeder System may also provide major alternate connections between important centers on the Trunk System. Approximately 3,200 miles of primary roads, designated US or NC numbered, comprise the Trunk Feeder Highway System.

The Trunk Feeder System will accomodate moderate to high volumes of traffic traveling shorter distances than traffic on the Trunk System. The Trunk Feeder System would allow for a moderate rate of land development abutting rights of way. Access control would be required only in certain critical areas.

Cost of recommended improvements on this System for the period 1960-1975 is set at $218,150,000.

Rural Collector Highway System

Other US and NC numbered routes, interconnecting centers of smaller economic and recreational importance and population concentrations generally less than 2,000 by 1975, are defined as the Rural Collector Highway System. Approximately 6,500 miles of roads make up the Rural Collector Highway System and serve abutting property uses primarily, carrying moderate to low volumes of traffic short distances. The highways on this system also serve to carry traffic to the Trunk Feeder and Trunk Highway Systems.

Improvements to the Rural Collector Highway System during the next 15 years will cost approximately $152,750,000.

Urban Highway and Street System

The Highway Commission is responsible for maintenance and improvements on some 3,000 of the 10,000 miles of the Municipal Street System in North Carolina. In order to provide service continuity to the Trunk and Trunk Feeder Highway systems, bypasses, beltlines and urban expressways, which provide this continuity of service, are classified as a part of the Trunk and Trunk Feeder Highway Systems.

All other highway system streets within municipalities are classified as a part of the Urban Highway System.

The Urban Street System consists of major arterials, crosstowns, innerloops and beltline routes, providing a continuity of service for the urban area closely paralleling the intra-state service continuity of the Trunk and Trunk Feeder Highway Systems.

The Commission is currently working with some 40 municipalities in designing thoroughfare plans for cities and towns throughout the State. Some of the larger cities are doing their own thoroughfare planning through their own staff, or through private consultants.

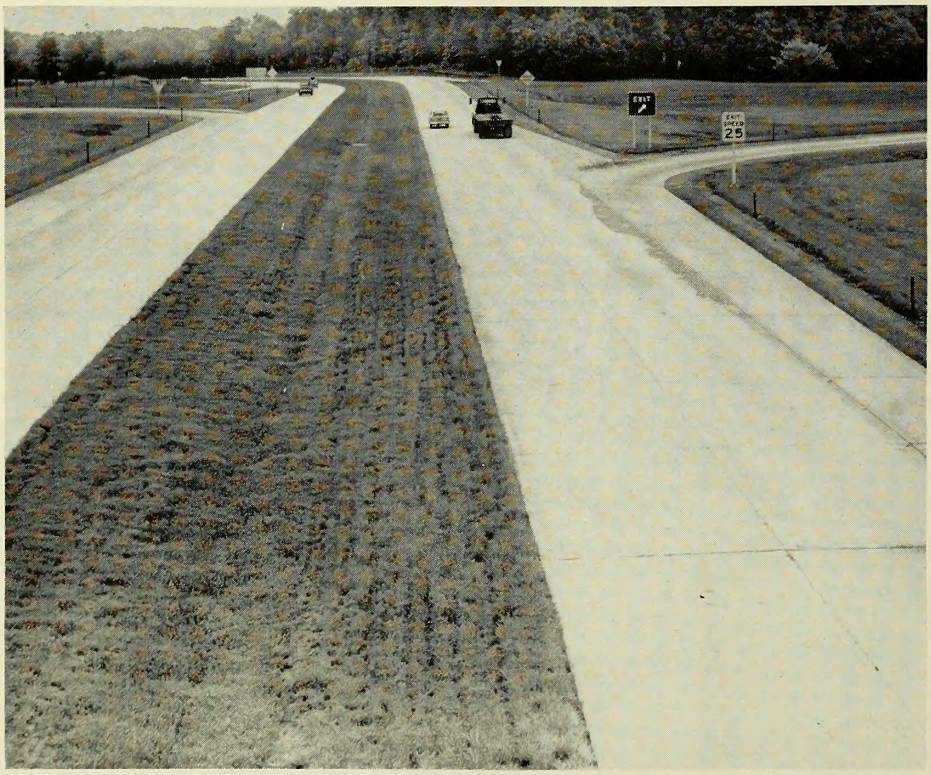
Estimated cost to improve the Urban Highway and Street System during the 15-year period is $255,100,000.

Rural Secondary Road System

Some 57,000 miles of roads located outside municipalities in the State, and which do not carry US or NC numbers, make up the Rural Secondary Road System. Many of these roads are located in the vicinity of major urban population centers, often leading to clusters of suburban residential development. In many cases, these rural secondary roads carry relatively heavy volumes of traffic.

Stabilization of inadequate unpaved sections and paving those roads carrying 50 or more vehicles per day on the Rural Secondary Road System would cost some $624,481,000.

In order to determine present and future inadequacies of the various high-



Widening to four lanes, with control of access, is needed now on many miles of the Trunk System. Improvements to Trunk System highways during the next 15 years would cost an estimated $721,500,000.



Improvements on the Rural Collector System over the next 15-year period would cost an estimated $152,750,000. The System is characterized by many narrow roadways and sub-standard bridges, as shown above.

way systems, the following procedure was used:

1) A complete analysis was made of population patterns in North Carolina, with populations projected to 1980 by regions, trading areas and counties of the State.

2) Using accepted criteria, relating traffic volumes on a given highway and the population of cities and towns connected by the highway, 1960 traffic volumes were projected to indicate the traffic which will exist on the Primary Highway System in 1975.

3) By use of "straight-line data and field observations," each section of each highway was studied for vertical and horizontal alignment characteristics, structural deficiencies and roadside development. These sections were analyzed by standard formulae, in terms of the capacity of the highway as related to the respective **level of service**, previously defined for each system.

4) By comparing the predicted peak, hourly traffic volume with the capacity of the highway to handle traffic, it was then possible to determine the extent of relative congestion, which would exist on each section.

5) A separate analysis was made of remaining Primary Highways, which would not experience heavy congestion, but might be considered inadequate to handle lower volumes of traffic due to poor alignment, sub-standard bridges, inadequate pavement widths or inadequate traffic lane widths. The general criteria for the development of the Primary Highways for the next 15 years envisions general pavement widths of 22 to 24 feet, with adequate shoulders, good alignment, adequate sight distance, etc. It is felt that many such Primary Highways would require such improvement even though future traffic volumes would not be substantial enough to cause major congestion.

6) In terms of the adequacy of existing pavements, a similar analysis was made of the entire Highway System. It was determined that many of the Rural Collector Routes would need major strengthening and resurfacing. These improvements were analyzed generally on a mileage basis.

7) A separate analysis was conducted of all of the substandard bridges on all of the Primary Highway Systems.

8) Major thoroughfare plans already adopted by both City and State were used in determining specific improvement projects in Urban areas. In cases where cities and towns were without completed thoroughfare plans, a general analysis was made of the existing street system, together with field observations, in order to determine the general scope of widening and improvement which is felt would be necessary.

9) During 1959, a nine-months field study was conducted in order to determine Secondary Road needs. Each section of the entire Secondary Roads System was analyzed by Division and District Highway forces to determine the cost of improving each road to the **level of service** previously defined. Cost of paving Secondary Roads having a traffic volume of more than 50 vehicles per day was computed individually for each route. Secondary road needs are tabulated in the report by counties.

Analysis of Tax Structure

When the compilation of highway needs, as set forth in this report, is compared to probable Highway Fund Revenues available to the Highway Commission, it is at once apparent that an additional $505,000,000 will be needed for the period 1960-1975. This is a net deficiency of Highway Funds of $33,600,000 per year as an average.

It is to be noted that this compilation of basic highway needs does not include scores of requests from various groups in regard to new roads which would open up new areas of North Carolina, or would serve a specific added convenience to the public. Had these types of highway requests been included, the average yearly deficiency of funds would approximate $45 to $50 million dollars.

Stating it another way, the highway needs, as outlined in this report, would provide an efficient minimum Highway System for North Carolina without excessive frills.

The net deficiency in Highway fund prospects leads immediately to two conclusions. Either the **levels of highway service** proposed are excessive, or the General Highway Fund structure of taxation in North Carolina is inadequate. It is the firm belief of scores of persons involved in preparing this report that these service levels as defined for the various systems, should not be compromised.

It is not possible to compare the Highway function in North Carolina with that of any other individual State. Reason for this, lies in the fact that the responsibilities of the several Highway Commissions vary from no jurisdiction in Secondary Roads and no responsbility

for Urban Streets to total responsibility for Secondary Roads and major responsibility for important Urban Streets here in North Carolina. Therefore, the best approach to comparisons seems to lie in an analysis of North Carolina in terms of total funds expended for highway and streets purposes in this State, as compared to total Highway Funds spent for all purposes in the United States.

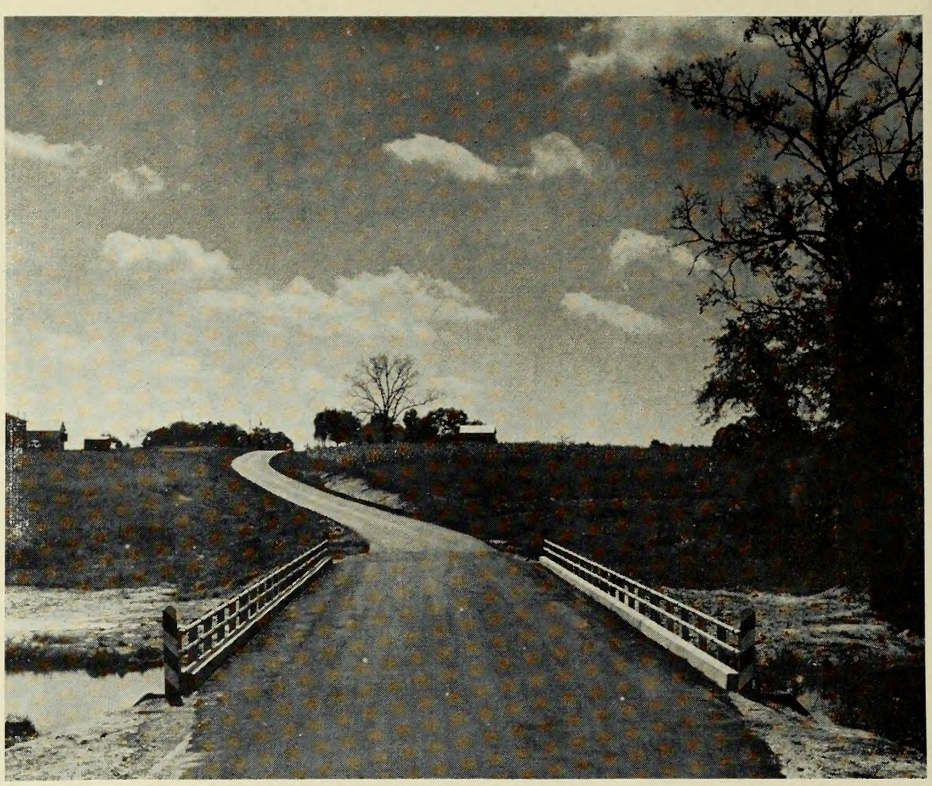
The following table compares North Carolina in terms of total Highway expenditures, including municipal costs with that of the Nation, in terms of three significant factors; that is, population, total highway and street mileage and total expenditures. It should be noted that these expenditures include only State Funds, and local funds and not Federal Aid.

Description	NC	US	N.C., as a % of the U.S.
Population	4,524,000	176,791,000	2.56%
Total Highway and Street Mileage	78,300 mi.	3,378,000 mi.	2.32%
Total Revenues	$141,454,000	$7,313,126,000	1.93%

The total population and total highway and street mileage serve as the best possible criteria for relating the needs of a State to the needs of the Nation. It is to be noted that North Carolina represents 2.56% of the Nation in population and 2.32% of the Nation in highway mileage. The composite of these two factors shows North Carolina with 2.44% of the Nation's population and highway mileage. In contrast, North Carolina's expenditure for all highway and street purposes is only 1.93% of the Nation's.

If population and mileage is accepted then as a criteria, North Carolina is spending approximately 80% (1.93 divided by 2.44) of the national average. It is significant to note that the Highway Needs Study also indicates that North Carolina would have for its Highway Commission only 80% of the funds necessary to meet its basic needs.

To understand this analysis, it would be well to remember the following facts. In 44 of the 48 continental States, the majority or all of the Rural Secondary Road System is under jurisdiction of county government. These Secondary Roads in other States are supported by local general fund property taxes and gasoline tax aid refunds to the county.



Traffic volumes on the Rural Collector System are generally low to moderate, but realignment, relocation and adequate bridge construction, as shown above, is needed, if this system is to serve the rural or suburban areas properly.

By contrast, North Carolina's Secondary Road System is supported entirely at the State level and entirely from the road-user tax revenues of the Highway Fund. The North Carolina State Highway Commission also has a greater responsibility within the urban area, than do most of the other States.

In North Carolina, the Highway Fund represents 85% of all of the taxes that are collected for all road-building and maintenance purposes. In the Nation, road-user taxes, including bridge and road tolls, represent only 60% of total revenue. Thus, in North Carolina, 15% of the revenue comes from municipal appropriations, from General Funds, property taxes, etc., while, for the Nation, 40% of the funds for all highway purposes comes from property taxes and appropriations from General Funds at the local level.

Thus, North Carolina's total revenue for all purposes is considerably below that of the national average.

It would be well also to contrast the mileage responsibility of the State Highway Commission in North Carolina with the average of the other State Highway Departments throughout the Nation. This may be seen in the following table:

Systems	N. C. State Highway Commission	All States	% of N.C. to Total of U.S.
State Primary	11,252 mi.	395,399 mi.	2.85%
State Secondary	56,854 mi.	234,180 mi.	24.20%
State Urban	2,764 mi.	46,869 mi.	5.90%
Total State Administered Highways	70,870 mi.	676,448 mi.	10.50%
Total Available Funds	$114,500,000	$3,750,000,000	3.05%

The previous table indicates the responsibility of the State Highway Commission only as it relates to the total responsibility of all of the State Highway Departments. This is an especially significant analysis, because it indicates that North Carolina has under its jurisdiction **10.50% of all the State administered roads in the United States, and that it operates with only 3.05% of the total funds used by all State Highway Departments.** The inescapable conclusion is that North Carolina cannot hope to provide a **level of highway service,** comparable to the national average, when it is operating with only 3% of the total funds as compared with 10% of the total mileage.

(Continued on page 20)

Alligator River Bridge Becoming A Reality

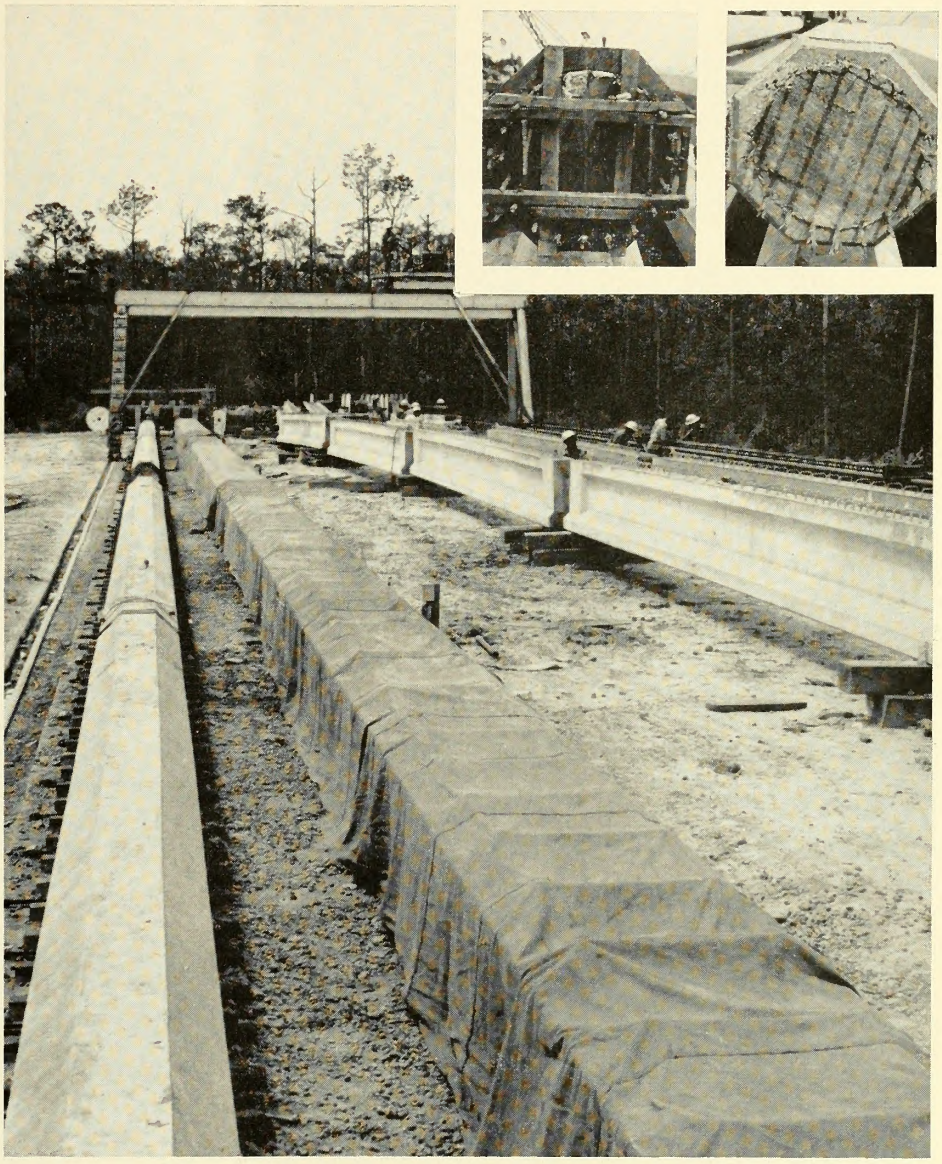
Sandy Point—Visitors to North Carolina's Outer Banks may not realize it but they are taking one of their last ferryboat rides across the Alligator River.

The activity underway here at the western shore of the river is part of the job of spanning the waters of the Alligator with a bridge, eliminating ferry service and providing a direct access to the Outer Banks. By the summer of 1962, the bridge, one of the largest ever built in North Carolina, will be under traffic and the three ferries which now transport vehicular traffic across the river will no longer be needed.

Opening of the bridge to traffic will bring the Dare resort areas closer to the central part of the State by some 40 miles. The bridge will provide a shot in the arm for all tourist interests in the area and will mean uninterrupted driving along US 64.

Another bridge scheduled for future letting is the Oregon Inlet structure, providing quicker access to Hatteras Island and the Seashore National Park, first of its kind in the nation.

A new way of life has been predicted for all of northeastern North Carolina with the completion of the bridges. Several years ago, the Umstead Bridge at Manns Harbor was opened to traffic, and since that time, there has been an upsurge in activity there. New motels, service stations and restaurants have appeared and party boat fishermen report increased business.



Here is the casting bed where piles and girders are cast on the spot for construction of the Alligator River Bridge. Inset shows a pile left, just after the concrete has been poured, and right, the finished product, after 12 hours of curing at 150 degrees.

This community already is witnessing a change. The undeveloped country around the ferry landing has been transformed into a miniature city, complete with night watchman, and long before actual construction was begun on the bridge, crews moved into the area and built a harbor for use in transporting materials to and from the scene. Several miles away, a trailer park was set up to accommodate the T. A. Loving Company employees who will call Sandy Point home for the next two years.

The biggest "do it yourself" project ever witnessed around these parts was set up only a few feet from shore, where Loving makes his own prestressed concrete piles and girders for the bridge. The casting yard was build on the spot as an economy measure, saving the cost of transporting piles and girders from commercial yards as far away as Raleigh or Wilmington.

By building the piles and girders at the construction site, the Goldsboro contracting firm has established a first in North Carolina road-building. This is the first time that a contractor has undertaken the job of casting his own piles and girders on location, according to Loving's superintendent on the job, G. B. Trimble.

The casting yard consists of two casting beds, equipped to cast 6 piles each at a time. The piles, ranging in length from 46 to 94 feet, are reinforced with 20 strands of 7/16 inch cable, manufactured in Italy. Some of the first piles put into place on the bridge were reinforced with Japanese-made cable, according to Trimble, who said the original shipment from Italy was delayed in port in New York by the long-shoremen's strike.

It takes 7 cubic yards of concrete to cast a 94-foot pile, and 12 hours later, after steam curing at 150 degrees, there emerges a giant pile, weighing more than 19 tons, and ready to take its place in the new bridge.

Following the curing process, the piles are transported by crane to a storage area nearby, or to the bridge site out over the water.

The casting yard also is equipped to cast 8 girders at one time. Each is 36 inches deep and 50 feet, 2 inches in length, for a total lineal footage of 55,183. There will be more than 1,100 prestressed concrete girders cast and placed into the structure.

There will be more than 1,300 concrete piles of various lengths going into construction of the multi-million dollar bridge. Placed end to end, the piles would reach from Raleigh to Durham.

The bridge, connecting the coastal counties of Tyrrell and Dare, will not be a high-level structure. In closed position, there will be a clearance of only 15 feet.

Although the bridge will cost nearly $3 million, highway officials figure the span will pay for itself in about 10 years.

On the Fourth of July this year, the Hatteras Inlet ferry carried 320 vehicles, while in 1957, the maximum load per day was only 64. Fourth of July traffic this year on the Oregon Inlet ferry totaled 1,271 and the gross total for the three-day weekend on the ferry was 3,452 vehicles.

The Alligator River Bridge will be constructed of 274 bents, built of concrete piles and reinforced concrete cups. (A bent consists of 4 piles each, except at every fourth bent, where six piles are used as a brace bent). The 261-foot draw span will be of steel construction, supported by a pivot pier and 2 rest piers. The draw will have a 100 foot clear opening for boat traffic on each side of the pivot pier.

At the present time, Superintendent Trimble has around 100 men working on the bridge project under his supervision, and there are about 14 highway Department engineers, inspectors and engineering aides assigned to the job under Resident Engineer W. J. Starr. A veteran road and bridge builder, Starr spent five years with the Tennessee Valley Authority as a bridge raiser.

On the job, there are many pieces of equipment which will be used before the bridge is completed and open to traffic in about two years. Some of the equipment being used includes a crane, for handling pilings for storage and loading on barges; 2 transit mixers to provide the finished concrete used in making the piles and girders; 2 stationary mixers, a pile driver, 3 cranes, 5 barges, 3 tugs and numerous other boats, trucks, floats, etc.

Out over the murky waters of the Alligator, the pile driver's pounding warns of the passing of the ferryboat era here, but the sound is music to the ears of those who fought so long for the bridge, and for them, the era cannot pass too soon.

Important Bridge Decisions Made

The Commission rendered two important bridge decisions recently.

One is to locate the Morehead-Beaufort bridge just north of the existing and outmoded structure carrying US 70 traffic over the Newport River.

Following a hearing at New Bern, the Commission approved a high level bridge to provide a 65-foot vertical clearance across the Inland Waterway channel, eliminating the necessity of a draw for the waterway, at the same time, allowing for later installation of an ocean going lift span, at any time in the future when deep draft vessels can use the area north of the bridge location. When the decision was made at New Bern, it was greeted with enthusiasm by citizens of Beaufort and Morehead City. Some 50 merchants along Arendall Street, in Morehead City, submitted a resolution endorsing the decision as did the town of Beaufort and many individuals in both.

Since that time, a handful of citizens have objected to the location. However, it appears that the opposition is not widespread.

Earlier, the Commission had been asked to locate the bridge and roadway far to the north of the existing structure. This plan would have doubled the distance (from 3 to 6 miles) between Beaufort and Morehead City, and greatly increased the initial cost of the bridge and raised the annual operation costs of motor vehicles between the two points by over ¾ of a million dollars per year.

The Bridge Department has sent a survey crew to stake out the Commission—approved location and hopes to place the project to contract late this year or early next year. The reason for the haste in placing the bridge to contract is that the existing structure piles have sunk and the roadway width is entirely inadequate for the 7 to 10,000 vehicles using it daily. The present bridge also is very vulnerable to wave actions from storms and hurricanes.

The second bridge location was that of the span across the Roanoke River and lake to be formed by the Gaston Dam. At first, it was proposed that the bridge be located at the site of the old Robinson's Ferry in Warren County and the people of Littleton, Northampton County and Rocky Mount had requested a Curl's Hill location near the Warren-Northampton County line. Surveys were made in the Curl's Hill location and it was found that the construction costs would be 2 to $300,00 higher. Commission engineers and planners took another look and came forward with a recommendation placing the bridge near the site of Eton's Ferry. Two locations were picked (1 mile west, and 1.8 mile west). At the present time, the location 1 mile west is preferable.

Here again, the decision met with widespread approval, especially from Warren County citizens who wanted a better road connection between Roanoke Township and the county seat, Warrenton, as well as Macon, Vaughn, Littleton and other points in the county. Part of the cost of construction will be borne by Virginia Electric and Power Company, which is constructing the multi-million dollar Gaston Dam.

Basis of the decision was that the location would offer the best and most economical transportation service to points north and south of the river, and will minimize travel distance to the north and south.

Henderson Man Named

(Continued from inside front cover)

A veteran of World War II and the Korean conflict, Betts worked in the engineering department of Burlington Mills for about 6 years before joining the Henderson oil firm he now manages.

He is married to the former Mary C. Bowers and they have two children, Harriet Anne, 8, and Thompson Taylor Betts, III, 6. They make their home at 252 Willowwood Drive, Henderson. In his spare time, Betts enjoys sailing at nearby Kerr Lake, and golfing.

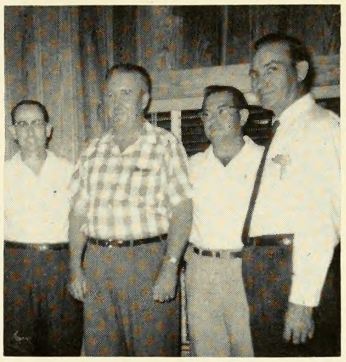
N. C. S. H. P. E. A. Association News

VOLUME 9—EDITION 5 SEPTEMBER-OCTOBER

Unit Officers 1960-1961



#1 — Earl Moore, Chairman; Ray West, Vice Chairman, J. R. Felton, Secretary.



#2—E. D. Credle, Secretary; J. D. Parker, Chairman; G. A. Taylor, Vice Chairman; Assoc. Pres. J. F. Abernathy.



#3—N. S. Day, Chairman; J. A. Saunders, Vice Chairman; Joe A. Darden, Secretary.



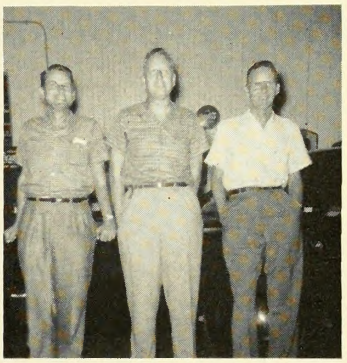
#4—Mrs. Pattie Abernathy, Secretary; J. V. Walters, Vice Chairman. Not pictured, E. J. Butler, Chairman.



#5—C. B. Alford, Chairman; Jimmy P. Brown, Vice Chairman; C. W. Crissman, Secretary.



#6—E. L. Green, Chairman; R. A. Averitt, Vice Chairman; W. L. White, Secretary.



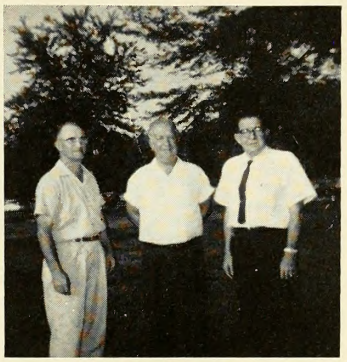
#7—A. L. Coltrane, Secretary; C. C. Painter, Chairman; J. B Taylor, Vice Chairman



#8—Douglas Patrick, Vice Chairman; Mrs. Virginia Williamson, Secretary; Z. V. Tolar, Chairman; Pres. Abernathy installing.



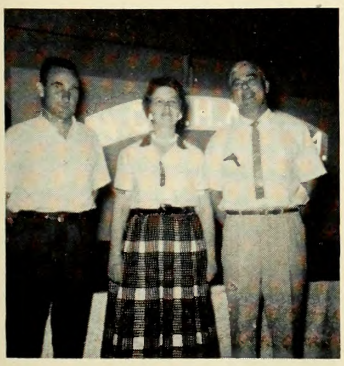
#9—R. L. Chew, Secretary; O. K. Stephens, Vice Chairman; Joe Lowry, Chairman.



#10—A. M. Buchanan, Secretary; Ed Finson, Vice Chairman; Banks Thomas, Chairman.



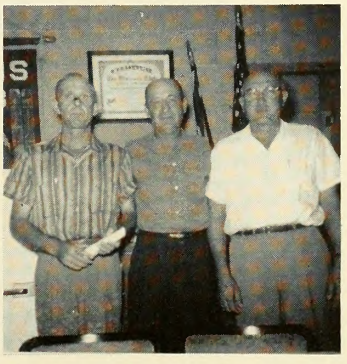
#11—H. E. Koontz, Vice Chairman; T. J. Winkler, Chairman; Ralph Bradshaw, Secretary; Pres. Abernathy installing.



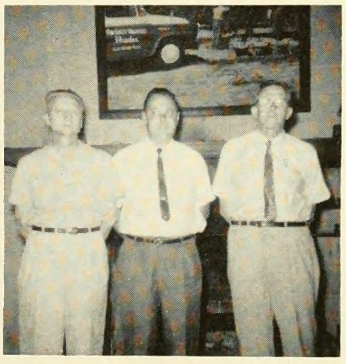
#12—K. E. Mauney, Vice Chairman; Mrs. Martha Allen, Secretary; J. D. Bebber, Chairman.



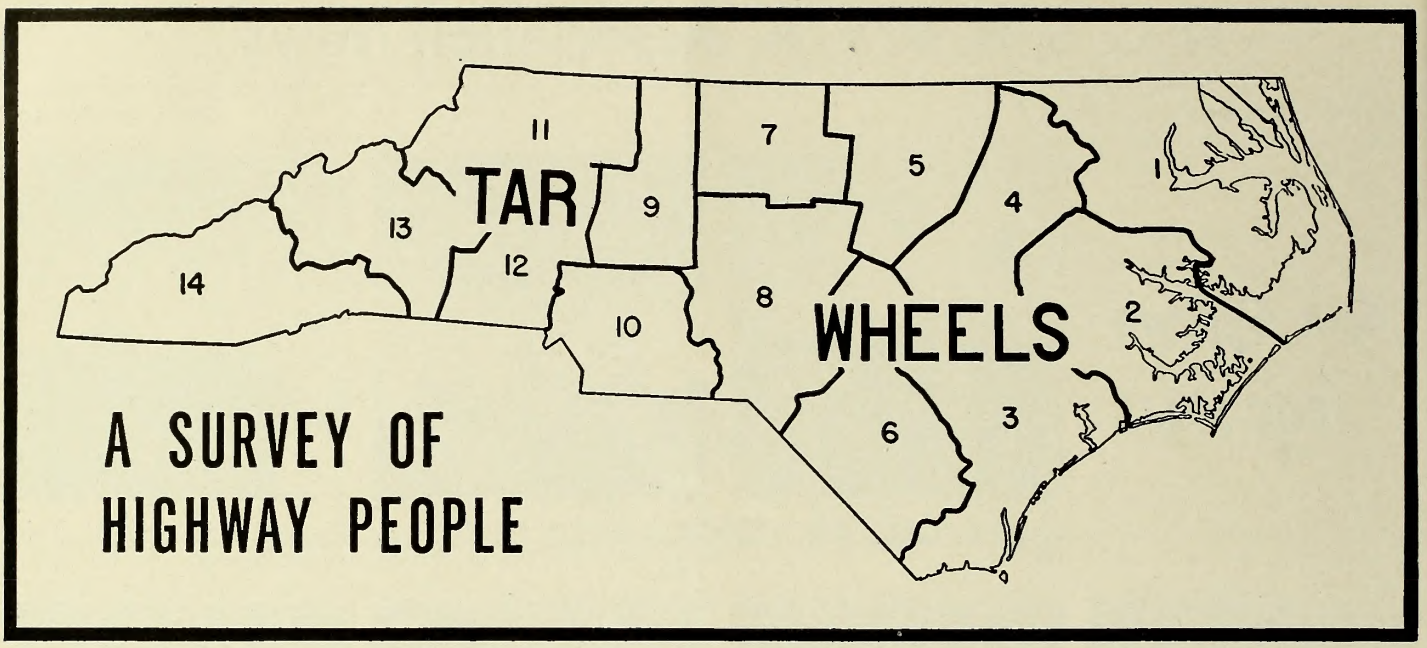
#13—J. T. Knight, Chairman; G. J. Young, Vice Chairman; Paul Robinson, Secretary.



#14—R. L. Pattillo, Chairman; Howard Barnard, Vice Chairman; J. H. Laughter, Secretary.



#15—W. F. Moody, Vice Chairman; John Holmes, Chairman; R. G. Setzer, Secretary.



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

CHIEF ENGINEER'S OFFICE — Honolulu, Hawaii for the month of September will be *Virginia Hassinger's* vacation paradise. Traveling by air, Virginia will be the guest of her daughter and son-in-law, Colonel and Mrs. W. N. Holm. *C. W. Lee* took his family to Pawley's Island, S. C. for a week's vacation the first of August. *Ivan Hardestry* took several weeks military leave during May and July to Ft. Leavenworth, Kansas and Fort Bragg. He is Chief of Staff of the 30th Division of the N. C. National Guard.

LEGAL — *Sylvia Kinlaw* visited relatives in Chattanooga, Tenn. the second week in August. *Kenneth Wooten* and his family enjoyed a week the last of July vacationing at their cottage at White Lake. *Mary Lib* and Brodie *Green* took their two children to Atlantic Beach for several days in July. *Shirley Cox* decided to take a week's vacation the first of August and stay home. *Charles W. Barbee, Jr.* and his family spent two weeks at Kure Beach during July. Welcome to *Mrs. Rachel Hogan* of Garner, new secretary to Attorney James F. Bullock.

LOCATION — *Katie* and Roy *Dearstyne* spent a weekend in July at Topsail Beach. *Louise High* and her family vacationed for two weeks in July at the beach and home. Employees were glad to see former employee, Anna Roberts, drop by the office for a chat recently. *Boyce Midgett* took his family to the beach for a week's visit the last of July. Area Locating Engineers *R. J. Wilson* and *G. A. McKinley* attended the N. C. Society of Engineers Meeting, held in Myrtle Beach, S. C. in July. *Nell Murphy* and her family spent a week in July visiting her parents in West Virginia. *Benny Payne* has been employed temporarily as Draftsman. The *Lloyd Cooks* enjoyed the last week in June vacationing at Atlantic Beach.



Former ROADWAYS editor Margaret Burk Carlson paid a recent visit to the Highway Building in Raleigh to visit friends and to show off her young son Robbie, age 7 months. Margaret edited ROADWAYS magazine for about 7 years, before her marriage. The Carlsons make their home at 21 Shady Lane, Attleboro, Massachusetts.

MAINTENANCE — Layton Gunter and his family vacationed at White Lake the first week in August.

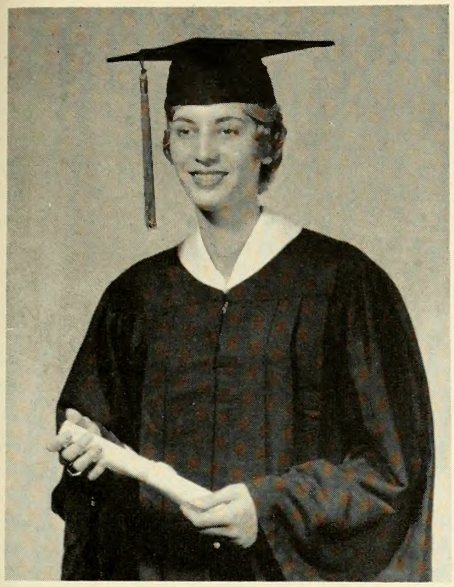
BITUMINOUS — Industrious *Pauline Pleasants* spent a week in July at home storing up vegetables for the winter in her deep freeze.

BRIDGE MAINTENANCE — Good luck to *Mrs. Alice Throckmorton* who resigned July 29 to accept another position. A former Highway employee, Mrs. *Margaret Williford* is her replacement. *Ruby Jones* spent several days at Atlantic Beach during July.

EQUIPMENT — *Beatrice Harrison* and her family went to Nags Head on a vacation the middle of July. Employees are glad to see *John Lambeth* back at work after several weeks' absence from an operation on his knee.

FEDERAL CONTACT — *Verlus Mason* took his family up to Messena, New York for one and a half weeks the first of August. During the vacation, Mason went on a fishing trip to Canada. The *R. R. Trevathans* entertained friends from LeRoy, Alabama at their home in Raleigh the last week of August.

ACCOUNTING — *Wanda Goodwin* is a new Key Punch Operator in the Department. *Mrs. Nancy Lewis* resigned to keep house. Two other resignations are: *Mrs. Martha Caddell*, who plans to stay home, and *Mae Stribic*, who is going home to Pennsylvania. *Mrs. Margaret Martin* of Raleigh replaces Martha, and



A June gradnate of Needham Brongh-ton High School, Annie Lou Jay is the daughter of Mr. and Mrs. LeRoy V. Jay of Raleigh.

Since winning a scholarship to the University of North Carolina, Annie Lou plans to study medical technology there.

Her father is Traffic Survey Manager in the Planning Department.

Mrs. Frances Ballew, Raleigh, replaces Mae. *Mr. and Mrs. Randy Pearce* announce the birth of a baby boy, July 29, at Rex Hospital. *Cecil Stearns* went to New York the first weekend in August to meet his wife, who had just returned from a three - month trip to her home in Paris, France. *Becky Holden* and her family spent a two-week vacation at the beach. *Freda Webb* enjoyed a weekend the last of July at Topsail Beach.

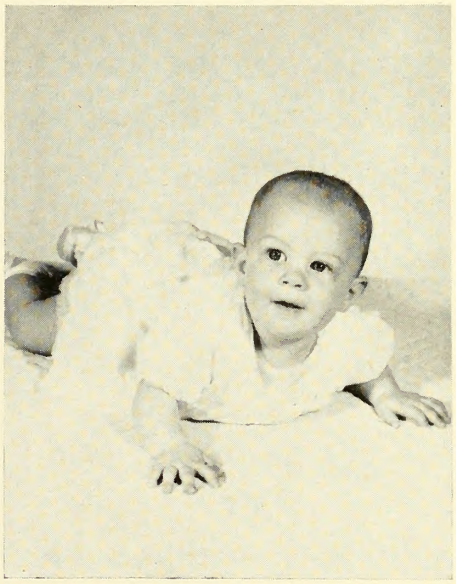
SAFETY — Welcome to *Miss Pauline "Polly" Hildebrand*, who recently joined the Department as a Steno II. Two temporary summer employees, now students are: *Mary Helen Barden*, Meredith and *Margie Rose*, WCUNC. *Ann Sterling* vacationed with her family for two weeks the middle of August in Morehead City. Guest on the trip was a little nine year old boy, Johnny, from the Methodist Orphanage. *Tarvia Jones* has completed nine weeks in the field showing "Defensive Driving" films.

RIGHT-OF-WAY — *Trulah Page* took the last week in July to visit her sister in Daytona Beach, Florida. Nags Head for a week in July was the *John Holmes'* vacation spot. *Warner Powell* is new assistant to John Holmes. Co-workers were sorry to lose *Shirley Capps*, who resigned the last of July to accept a position with a Raleigh legal firm. *Quita Clifton* will take Shirley's place. Welcome to the following new employees: *Miss Rose Ann Harris* of Smithfield, Steno I, *Miss Eleanor Brantley* of Raleigh, Typist Clerk I, *Collis Lewis* of Raleigh, *Phil Carroll*, Reidsville, and *Harold Davis* of Wilson, all Right of Way Aides. *Charles Adkins* has returned from two weeks' military leave with the Army Reserve at Fort Bragg. It's nice to have *Russell Bullock*, who recently transferred from Personnel, as a Right of Way Aide. And congratulations to the Bullocks upon the birth of their second baby boy, Christopher Steven, born August 1 in Rex Hospital.

PERSONNEL—The *Sam Badgetts* vacationed at Atlantic Beach the first week in August. *Betsy Shelton* was out with a tonsil infection several days in August. *Dot* and Ray *Medlin* joined friends for a week's stay at Carolina Beach during July. *Lyman Melvin*, co-chairman of the Raleigh Beauty Pageant, attended the State Pageant in Charlotte in July. *Dave Richards* took a week's vacation the first of August to move into his new home in Pittsboro. *Barbara Carlyle* reports a fine weekend with friends at Buggs Island, water skiing and boating.

SECONDARY ROADS — One of the Commission's most eligible bachelors, *George Willoughby*, Administrative Assistant in the Department, will lose his bachelor status on November 26, when he weds pretty Miss Blanche Williams of Siler City. Miss Williams is the daughter of Mr. and Mrs. Guy V. Williams, and teaches school at Sherwood Bates. *Bill Ingram* went on two-weeks military leave with the Army Reserve in Fort Jackson, S. C., the first of August.

PHOTOGRAMMETRY — *Ed Page* took time off the first of August to move his family into a newly-bought, three-bedroom brick home at 2905 Barmettler Street. Welcome to the following new employees: *Bernice Farmer*, Draftsman, who formerly worked for Bell Labs; *Tom Brown*, Photogrammetric Aide, from the Georgia Highway Commission; and *John Dempsey*, Highway Engineer I, who is a graduate of Wilmington College, and was formerly connected with the Corps of Engineers for four years at Seymour Johnson Air Force Base. Trainees in the Department are: *Billy Isom* of Pocahontas, Tennessee and a graduate of Gaston Tech; and *Jack N. Matthews* graduate of Wilmington College, formerly with the Corps of Engineers for two years. New Photographers are *Pete Bourke* and *Harold Powell*, who transferred to Photogrammetry from Public Relations July 1. *John D. MacDonald* and his family attended the Wagon Train Day celebration in his hometown, Murphy, during the Fourth of July holidays. For the occasion, John grew a set of "chin whiskers." *Dick McCabe* traveled to Washington, D. C., on Photogrammetric business with Tellurometer, Inc., and Air Surveys, Corp., over the Fourth of July. He reports getting a good look at a large section of Interstate Highway in the Washington area, but had trouble finding a place to get off. *John Isley* and his wife are proud owners of a new home in the Oakwood Heights section of Cary. Due to difficulty on the proposed moving day, John and wife moved into the



CHARMING little Donna Allyson Kornegay, age five months, is the pride and joy of Lydia and E. T. Kornegay. Donna's mom is secretary in the Equipment Department.

College Inn Motel for two weeks at the expense of the building contractor before actually occupying their new home. He states he surely did enjoy the motel swimming pool at the temporary home. *Gwen Hester* spent the Fouth of July holidays at Long Beach and returned to work with the proverbial "golden tan". The *Carter Reames* went to Massachusetts in July to visit Mrs. Reames' family. Congratulations to the *Jim Morrisons* on the birth of a daughter, Martha Louise, July 7. *Harold Powell* took his family to Plymouth, Ohio for a 10-day vacation to visit Mrs. Powell"s people the first of August.

TRAFFIC ENGINEERING — *Pete Deaver* took his family on a vacation to Salt Lake City, Utah to visit friends and view the beautiful scenic attractions. *Emily Blount* and her husband, Sam, attended the joint meeting of the N. C. And S. C. Societies of Engineers at

Myrtle Beach, S. C. *Ruth Parkerson* went to Philadelphia to attend the National Federation of Business and Professional Women's Clubs. She made a stop in Washington, D. C. for a visit with frends.

CONSTRUCTION — *Barbara Williams* enjoyed a Florida vacation July 22 - 30. *Olivia Strickland* resigned August 1 to accept a position with Conservation & Development. *Mary G. Murphy* replaces Olivia. From the sea to the mountains-the *David Barbers* enjoyed both on their vacation. *Virginia McDonald* and her family had a fine time vacationing at Atlantic Beach and at home during her two-week vacation.

BRIDGE — New employees in the Bridge Drafting Room are: *William M. Andrews, Jr., Elmer G. Alford, Donald R. Irving* and *Joseph W. Adams. Ransom J. Massengill, Jr.*, is a summer employee. Off to military camp recently for two weeks went *James L. Burney, Ray Looper* and *Ostia Self*. Good luck to *Zebulon R. Woodall* and *Ray Looper*, who resigned to work with private concerns. New trainee in Drafting is *Olin J. Meeks*. Yachting on the Chesapeake Bay was a lot of fun for *R. A. Shaw* on his June vacation. A papa for the fourth time, *Owen Reagan* is mightly proud of his third girl in a row, Carol Leigh, born July 13. *Mr. and Mrs. J. L. Norris* attended the Optimist Club International Meeting in Grand Rapids, Michigan during June.

ROADWAY — *Mr. and Mrs. Earl Willis* announce the birth of a daughter Andrea Renet, July 10. Papa Earl is a Highway Engineer in Drafting. *Charles Heilig, Robert Walker* and *Raymond Crouse* spent two weeks on military leave at camp in July. Neill M. Salmon went to summer camp two weeks in August in Okefenokee, Georgia. Recent Vacationers: *Frank Starnes* and family, Daytona Beach, Fla.; the *Jack Griffins*, Morehead City; *Mr. and Mrs. James D. Duncan*, Morehead; *Martha Enscore* and husband Myrtle Beach; *Richard W. Purser*, two weeks in New York & Philadelphia; and the *T. G. Moodys*, a wonderful vacation at Niagara Falls, Ontario, Montreal and Quebec, Canada. Highlight of their trip was visiting various antique shops. Welcome to the following new employees in Roadway Drafting: *John H. Covington, James T. Webb, Henry C. Clegg, Jimmy D. Lee, Jesse R. Mills* and *John W. Watkins. Randolph Chandler* from Apex replaced *Allen Long* in the Roadway Proposal and Contract Dept. Allen transferred to Planning in June, and so did *Nellie Tutor*, former draftsman in the Dept. Fellow workers are wondering if the new popcorn machine in the basement was not custom-made and installed especially for *Lester* "Pop" *Brown* and *Orval* "Corn" *Riffe*.

MATERIALS & TESTS — Vacations galore! Recent vacationers and their favorite spots are: *Johnny Richardson*, Atlantic Beach; *Jeter Daniel* and family the Blue Ridge Mountains; *Mr. and Mrs. Wayne Meares*, Williamsburg, Va.; *Hubert Watkins* and family, Virginia Beach; *Robert Huang* and family, Western North Carolina; *Ed Walters* and family, Atlantic Beach; *Lawrence Marshall*, Virginia Beach and Norfolk, Va.; *C. G. Stephens* and family, Nags Head and Manteo; the *Royce Beachams*, Tennessee; *C. E. Mitchell* and family, Carolina Beach; *W. A. Wood and wife*, Southport; *Alma P. Cone*, her husband and son Johnny, Carolina Beach; *Sara C. Bryan* and husband, Cherry Grove, S. C.; *Mr. and Mrs. Gilbert Morgan* and daughter, Sharon, Wrightsville Beach; the *James Garners*, Blue Ridge Parkway and Columbia, S. C.; *Lucille Crawford*, son "Cricket" and relatives from Albuquerque, New Mexico, Atlantic Beach; and the *F. S. Hardys* visited relatives in Norfolk and Richmond, then journeyed on to Jamestown and Williamsburg, Va.



Mrs. Bobby R. Hansley, who before her marriage August 6 in the Four Oaks Methodist Church was Miss Judy C. Stephenson.

Mrs. Hansley is secretary to W. A. Wilson, Jr., Roadway Design, and Corporal Hansley is with the 82nd Airborne Division at Fort Bragg.

PLANNING — Atlantic Beach was the *L. V. Jays'* headquarters for a week in August. *Mertie Dixon* and family enjoyed a July week at Carolina Beach. *Gwen Critcher* spent several days at the beach in August. *Jo Ann Harmon* reported a fine week's vacation in August driving down from Maryland along the coast to North Carolina. *Doris Hall* and her family chose White Lake for a week in July. The *A. E. Bevacquas* and two daughters visited his family in Mt. Vernon, New York during July. And *Marvin Cates* attended the International Civitan Convention in Miami Beach, Florida the last week in June. *Mildred Buckman* and her family have moved from Boylan Heights to a new home on Stevens Road, Longview Gardens. *Pete J. Marchetti, Jr.* is Research Analyst I in Mr. Bevacqua's office. (Mapping Section) - *Bryan Moore* and his family enjoyed a week's vacation the first of July in the mountains of S. C. at Jocasse. It's nice to have *Mrs. Rowena G. Keith* as Clerk-Typist. Fellow workers were sorry to lose *Fred Luxton*, who resigned to accept a position with the Chemstrand Corporation. Welcome to *Allen McDuffie* of Durham and *Moody Long* of Apex, new draftsmen in the Dept.

PURCHASING — *Olene Ennis* vacationed in Orlando, Florida for a week. *Leona Sidbury* and her family enjoyed a recent weekend boating and skiing with friends on the Pamlico River. *Louise Shepherd* and family spent several days the last of July vacationing at Atlantic Beach and at home. *Jack Munns* took his family to Myrtle Beach for a week in July.

REPRODUCTION — Welcome to *Joe Denton*, new Duplicating Operator, who transferred from the Lab July 1. *Charles Lassiter* reports he and his wife had a wonderful time vacationing with friends at Myrtle Beach for a week in July. Boating, fishing and skiing at Bear Creek for a July week was enjoyed by the *Earl Williams* family. Does anyone know how large the fish were, which *Raymond Jones* and his family caught during their week's vacation at Pamlico Sound?

DIRECTOR'S OFFICE—Nags Head was vacation headquarters for *Nancy* and Spencer *Hall* during their vacation the second week in August.

ADVANCE PLANNING — The *R. J. Kimleys* and four children report a splendid camping trip at Myrtle Beach. *Jim Prince* took his family to Abbeyville, S. C. to visit his folks for several days' vacation the first of August. *Carolyn Beck* reports an exciting time during her week's vacation the first of August in Baltimore, Maryland and Chesapeake

Bay. The girls in the office would like to know where *Billy Rose* went the first weekend in August. *George Stephens* attended the Democratic Convention in Los Angeles for a day during his recent vacation in California and reports he saw lots of North Carolina politicians. *Raymond Nemmers*, summer draftsman, has resumed his studies at State College where he is a sophomore in Industrial Engineering.

DIVISION ONE

By M. ELWOOD COPELAND

Division Correspondent

THE ANNUAL DINNER meeting of Unit One was held recently in the Hertford School Cafeteria. New officers are: chairman, *W. Earl Moore*; vice chairman, *Roy West*; secretary-treasurer, *J. R. Felton*. Special guests included Division Engineer W. N. Spruill, Mike Abernathy, Robert Turner, Bob Upton and Otis Banks. New officers of the Perquimans chapter are: chairman, *Robert W. Carpenter*; vice chairman, *Mrs. Jean Humphlett* and secretary-treasurer, *Elbert B. Taylor*.

SERVICE PINS were presented to employees of the Hertford Equipment Shop recently. Those in the spotlight included: *Charlie D. Ward*, *S. C. Stallings* and *M. Elwood Copeland*, 5 years; *S. C. Dail* and *Julian Butler*, 10 years; *Carlton Bauer*, 15 years; *A. D. Castellow*, and *Joe E. Wagner*, 20 years and *Oliver Harrell*, 30 years.

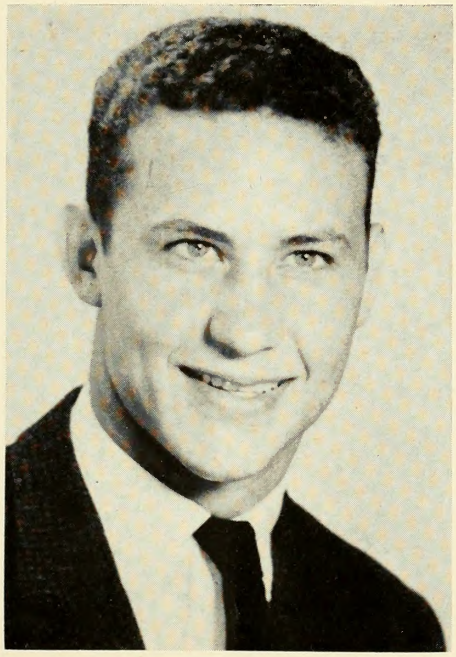
A SAFETY MEETING conducted by Safety Engineer *Tarvia Jones* was attended by all Division One personnel.

VACATIONERS include *L. K. Thompson*, clerk in the Elizabeth City District Office, who spent a few days in Charleston, S. C.; Mr. and Mrs. *W. J. Davis*, who spent two weeks visiting relatives in New York and motoring through the New England States and Canada and the *Joe Wagners*, who visited their son in Florida. *E. M. Snow* has returned to work after two weeks National Guard Training at Fort Bragg. *R. M. Saunders*, Locating Engineer and his group have returned from the western part of the State and are now in Elizabeth City. *L. D. Webb, Sr.*, Right of Way Engineer, has returned after attending an appraisal school in Chicago.

A FAREWELL SUPPER was held in the Hertford Equipment Shop for Mechanic *Craig Harrell*, who retired June 30 after 18 years with the Highway Department, and employees presented him with a gift and a wish for much happiness in his retirement.



This young lady is Cheryl Lynne Smith, 10 months, the granddaughter of Resident Engineer W. M. "Connie" Smith of Elizabeth City.



Samuel Theodore Chappell of Jarvisburg, son of Mr. and Mrs. M. J. (Duck) Chappell, who graduated from Griggs High School in June and is attending East Carolina College. Duck is a Machine Operator in Currituck County.

GET WELL WISHES are extended to Mrs. *E. A. Walker*, wife of Supervisor Walker of Wanchese; *J. E. Baines*, Gates County Foreman; *Leroy Abbott* of Dare County and *W. H. Batchelor*, welder in the Hertford Equipment Department.

DIVISION TWO

By ROY D. FRANKS

Division Correspondent

CONGRATULATIONS to Auto Parts Supervisor *E. D. (Sam) Credle*, who was named Toastmaster of the Month by the Greenville Toastmasters Club. Congratulations are in order also to Mr. and Mrs. *H. F. Burns, Jr.*, who were married recently. She is the former Frances Tucker of Greenville. The groom is employed by the Division Two Right-of-Way Department.

OUR DIVISION welcomes *H. W. Wheless* and family. to Greenville. He is Division Appraiser in Right-of-Way. Other newcomers are Right-of-Way Aide *Sam Pollard* and family, and *Mrs. Merle Bazemore*, secretary.

THIRTY-FIVE YEAR PINS have been presented to *C. D. McKeithan*, *Cleavie Haislip*, *C. Y. Griffin* and *G. I. Collins*.

BEST WISHES to *W. A. Fuller* and *L. P. Hardison* who have retired.

UNIT 2 held its annual meeting at Respess Bros. Restaurant, with the following guests present: Mrs. Grace M. Hartzog, member of the Personnel Council; *J. F. Abernathy*, Association president; *R. L. Turner*, first vice president; John McDevitt, State Personnel Director; Bob Upton and Buster Manning of the Personnel Department; Warden K. B. Bailey of Central Prison; Division Engineer *C. W. Snell, Jr.*, Former Asst. Div. Engineer J. L. Phillips and Otis Banks, executive secretary of the Association. The following officers were retained for another year: *J. D. Parker*, chairman; *G. A. Taylor*, vice chairman and *E. D. Credle*, secretary-treasurer.

VIRGINIA was the spot which *Miss Hazel Baker*, secretary in the Division Office, chose for her vacation.

LANDSCAPE SUPERVISOR *Donald Woodcock* suffered painful injuries in a recent accident and we hope he is much improved now.

OPEN HOUSE was held recently at the new Beaufort County Maintenance Yard in Washington. Guests from Ral-

eigh included *Ivan Hardesty, C. B. Taylor, J. J. Powell, K. R. Scott* and *A. S. Furtado.*





These two pictures show the new Beanfort County Maintenance Yard Buildings. Top photo shows, left to right: several truck sheds, the headquarters building, service station, pump honse and combination sign shop, warehonse and repair shop. Bottom photo shows a closenp of the headquarters building, service station and pumphouse.

DIVISION THREE

By IRENE C. HEWETT

Division Correspondent

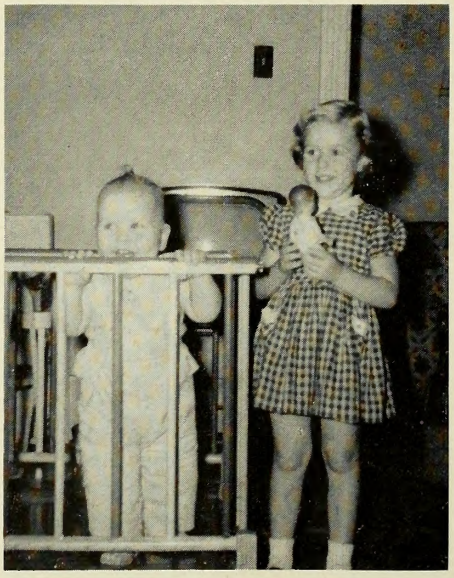
QUITE A FEW of us in Division Three have been enjoying vacations. *J. W. Meadows* spent his going to Canada and reports he enjoyed all the lovely scenery. *R. A. Ashworth* visited his son in Rock Hill, S. C. and *E. N. (Red) Pearsall* spent a week at Kure Beach just fishing and relaxing. Kure was the vacation spot chosen by *R. V. Biberstein. Tony Hewett* spent some time fishing at Southport, while *Mrs. Marie Ferrell* spent most of her vacation at home recuperating from an accident which happened during a trip to the beach. Major and Mrs. A. B. Whitfield and children spent their vacation visiting relatives and motoring to the mountains; *Mrs. Nell Straughan* visited relatives in Springfield, Ill., and yours truly spent a few days around home, the beaches and Morehead.

CONGRATULATIONS to the *R. R. Trevathans*, whose first son, Robert Raymond III, was born June 30.

WE WELCOME *James H. (Kenneth) Corbett*, who has joined Right-of-Way in Wilmington and it's good to have *A. H. Griffith* back with our construction forces after spending some time in Division 13; as well as *E. L. Schaub* and *David L. Carter*, who have returned to work after extended illness.

A PARTY was held in honor of Resident Engineer *J. D. LeGwin*, who retired in July. Mr. LeGwin was presented a nice fishing rod and reel, and his wife received a corsage. Cokes and cookies were served to approximately 30 persons.

BEST WISHES to R. A. Ashworth, III, son of our District Engineer, who has been promoted to Superintendent of the Bowaters Carolina Corp., pulp mill, at Catawba, S. C. A tip of the old hat also to David Brown, son of Right-of-Way Engineer *Roy Brown*, who holds the highest batting average for his team in the Winter Park Optimist Little League.



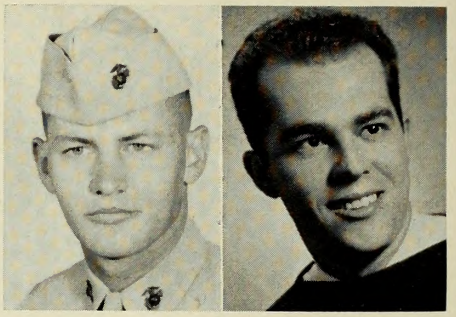
THE SMILING BISSETTES—Snsan, 4, and Tim, 1, are the children of Mr. and Mrs. Bobby Bissette. Until recently, Bobby was with Division Four Constrnction. At the present time, he is working on the I-95 project at Gaston.

DIVISION FOUR

By AUDREY L. PERRY

Division Correspondent

CONGRATULATIONS to *Robert Franklin Coleman* and wife, on the birth of their first child, a daughter, Teresa Raye; to *Grover Mitchell* and wife on the birth of a son; to the *C. V. Olivers*, whose son was born July 6 and to the *C. T. Smiths*, on the birth of a son.

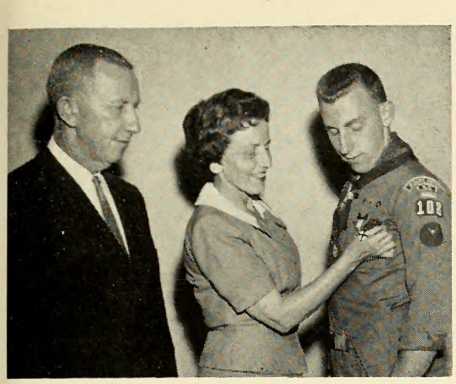


HOME ON LEAVE—James, left, and Kramer Jackson, sons of Mr. and Mrs. S. R. Livesay, are visiting their parents before returning to active dnty with Uncle Sam. James is in the Marine Corps and has jnst returned from Okinawa where he was stationed for 14 months and Kramer is in the Army and has returned to the States after 2 years in Germany. Livesay is Office Engineer in Division Four.

SYMPATHY is extended to Road Oil Foreman *W. O. Puckett*, who lost his father recently; and to Highway Inspector *C. B. Bullock*, whose mother died recently.

ON THE ROAD to recovery now is Mrs. *T. D. Grantham*, who suffered a broken hip in a recent fall and has now returned to her home from the hospital. Glad to have Sign Supervisor *Wade Pridgen, Jr.*, back at work after a stay in the hospital, along with *Leland R. Davis*, also of the Sign Department, who was injured in an off-the-job accident recently. Get well wishes go out to *C. B. Bullock, Paul Mitchell, Pete Harlow, Mrs. Roger Jenkins*, Mrs. Irene Harlow, wife of *A. C. Harlow; J. C. Mooris* and *J. E. Cooper*. A broken arm is the reason Machine Operator *Marvin T. Robertson* has been absent from work, but we are glad he is back now.

CONSTRUCTION FORCES have decreased considerably, due to transfers to other parts of the State. *Wade Brooks, James R. Barnes* and *Ronald Richards*

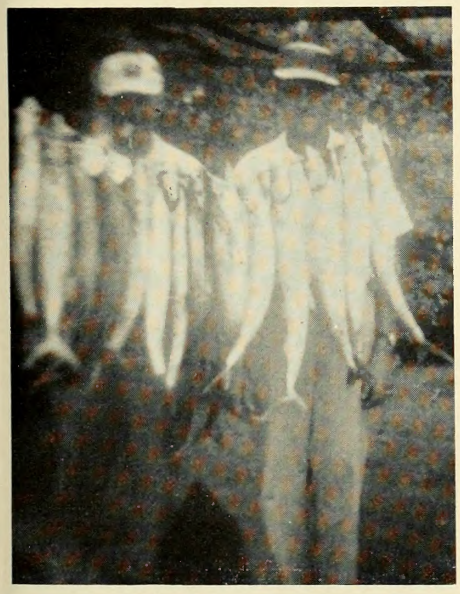


Mrs. M. P. Yount pins the Pro Deo et Patria (For God and Country) Award on her son, Charles Edward Yount, at Trinity Lutheran Church in Rocky Mount. Looking on is his father, who is Area Foreman with Nash County Maintenance.

are now in Hillsboro, and *Bobby Bissette*, *C. B. Wood* and *J. E. Skinner* have been transferred to Gaston to work on I-95.

GOOD LUCK to Inspector *N. B. Lee*, who resigned recently to return to school.

VACATIONERS in the news include *Katie Braswell*, enjoying the beach; *Dixie Toler* resting at home; *Henry Wiggins* visiting his daughter in New York; Prison Supervisor *Hoyt B. Nichols* vacationing at home (work to be done on the farm?); the *Joe Landens* spending a few days at Nags Head; the *Bill Coopers* attending a ship reunion in Indiana; the *W. B. Littles* at White Lake; the T. W. Wilson and W. M. Mashburns touring points in the North Carolina mountains; and *Mrs. Betty G. Simon*, visiting relatives in Wilmington.



A SUCCESSFUL TRIP — Machine Operators S. S. White and B. N. Robertson are pictured with part of their catch on a recent fishing trip to Snead's Ferry. 26 king mackerel were taken by White, Robertson, and Machine Operator J. R. Taylor.

CONGRATULATIONS to Maintenance Yard Assistant *James E. Cooper*, sergeant in the National Guard, who received a commendation as patrol leader for "setting an example of using good common sense" while on a 23-hour field problem at Fort Bragg. His company received an "excellent" rating.

WE WERE SADDENED by the death of *Pervis Bissette*, who died July 15 of a heart attack. He had been a truck driver for the Highway Department since 1947. We regret, also, to report the death of *John S. Warren*, Area Bridge Construction Engineer, on July 25. Mr. Warren came with the Department in 1926, and was assigned to the First Division. He later transferred to Bridge Design, where he served as Draftsman and designer for several years, later being promoted to Bridge Maintenance and Construction Superintendent, which he held until April 1959, when he became Area Bridge Construction Engineer.

OFFICERS of the Nash Chapter, Employees Association, elected at a recent meeting are: chairman, *J. E. Dellbridge;* vice chairman, *W. S. Burbage;* secretary-treasurer, *C. F. Williams.*

TWO EMPLOYEES in District Two have been retired due to disability. Floyd H. Pennington has been employed as a truck driver with Wilson County Maintenance for almost 15 years and Robert C. Taylor, who came to work in August 1945, had worked as section foreman helper, maintenance yard assistant and truck driver with Nash County Maintenance.

THOSE on the sick list recently include *John Williams*, *E. W. Owens*, *Willard Daniel* and *Willie G. Moss.*

NEW UNIT FOUR officers are: chairman, *E. J. Butler*; vice chairman, *J. V. Walters* and secretary-treasurer, *Pat Abernethy.*

DIVISION FIVE

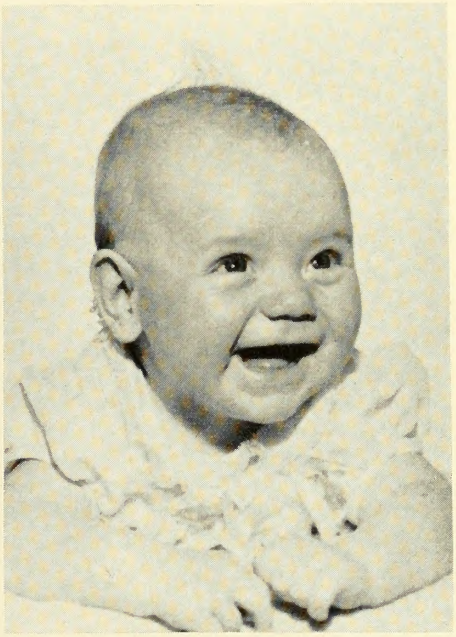
By PEGGY BRIGHT

Division Correspondent

A SPEEDY RECOVERY is wished for our Division Engineer, *J. W. Jenkins.* Others on the sick list recently include *Kirk Duncan*, *L. L. Lawrence*, *Raymond Tippett* and *Z. W. Holder.*

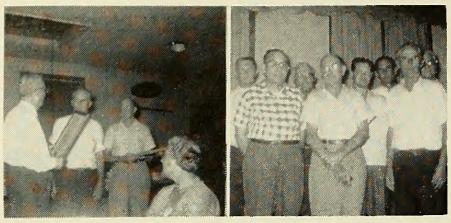
THE STORK has been pretty busy around here. Congratulations are in order for Mr. and Mrs. *Quinton L. Sorrell*, on the birth of a daughter, Charlene Annette. The Sorrell's also have two boys, Lee and Charles. It's a boy for Mr. and Mrs. *Curtis Williams*, This is a first for the Williams and they have named him Gregory.

WE REGRET to announce the disability retirement of *A. B. Wheeler*, better known as "Fat". He had been with the Highway Commission for over 30 years.



"THAT'S MY DADDY," says Mary Lynnette, and she's speaking of Engineering Assistant Cloyce Alford, of the Fifth Division Office.

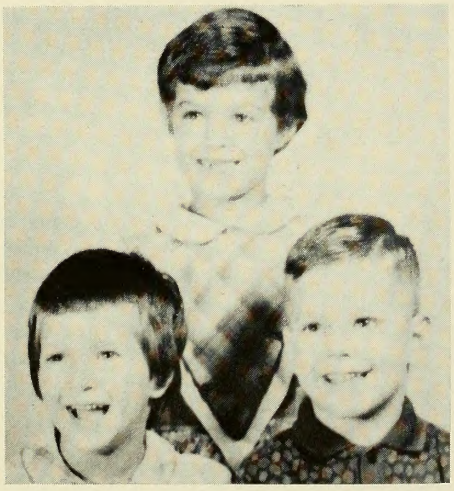
SUN AND SWIMMING was enjoyed by Mr. and *Mrs. Leon Harris* and children Cheryl and Russell, during a vacation at Carolina Beach. Mrs. Harris works in the District 2 office. We've heard some tall fish stores by these men: *J. B. Alford*, *H. W. Beddingfield* and *F. H. Galloway*, but haven't seen any fish. (Not even a picture of one!) Does anyone know the way back from the Blue Ridge Mountains? If so, please tell *W. H. Walker*, who managed to get lost while on a vacation there with his family. Reliable sources have it that around Kerr Lake, *Joe Greenway* is better known as the "Frog Hunter." *W. C. Grissman* and family enjoyed a vacation at Topsail Beach and *Mrs. Peggy Bright* and children spent a few days at Beaufort with her sister, where they enjoyed swimming and boating.



These employees were honored recntly at a supper held by the Fifth Division Equipment Department. At the left, George Brinkley presents retirement certificates to Henry Fuller and Willie Faulkner, who retired in July. In addition, service awards were presented to the men pictured at the right. They are: (front row) Herschel Smith, 25 years; and retired employees Fuller and Faulkner; (back row) Wade Tilley, 5 years; J. H. Alford, 35 years; C. E. Grinstead, 10 years; Ervin Manning, 5 years and F. R. Hunter, 25 years.

GLAD to have *Miss Mary Reavis* back at work after being hospitalized. We wish Mrs. *J. W. Jenkins* a speedy recovery. It is good to see *H. L. Alford* back at work after a long illness, along with *K. M. Duncan* and *J. L. Davis*. *W. C. Fowler* and *W. B. Grady* have been hospitalized recently. Little Lynn Alford, daughter of the *Cloyce B. Alfords*, is home after a brief stay in the hospital, and Gregory Alan, young son of Mr. and Mrs. *Curtis R. Williams*, is reported doing well following recent surgery.

STORING UP for the winter, is exactly what *Mrs. Mattie K. Hall* has been doing all summer, and she is mighty proud of all those canned goods on her shelves.



THE THREE BRIGHTS—Starr, Honor and Jeff are the children of Mr. and Mrs. C. M. Bright of Durham. Mrs. Bright is a stenographer in the Division 5 office, and also serves as correspondent for ROADWAYS.

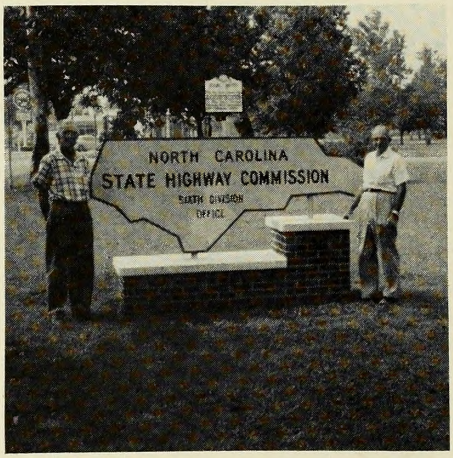
OUR SYMPATHY goes out to these people: *C. Barnett*, in the death of his mother; *J. D. Champion* in the death of a son, Glenn; to the family of former employee *W. J. Linsey*, who died recently.

WELCOME, *Shanks Bradsher* and *Bill Burgess*, who are working in the Right of Way Department, and *W. G. Privette*, Maintenance Yard Assistant at Bunn.

DIVISION SIX

By STEVE AMMONS

Division Correspondent



G. L. Coleman, Sign Supervisor, and J. W. Spruill, Division Engineer, admire the new sign recently completed by the Sign Department and erected at the Division Office in Fayetteville. Both Mr. Spruill and Mr. Coleman have over 39 years with the Highway Department, for a total of 78 years of service.

HERE'S HOPING *J. G. Lanier* will be back at work soon following an accident in which his leg was broken. We are wishing a speedy recovery for *George Holder* and *N. D. Gillis*, patients at the Veterans Hospital in Fayetteville; *V. D. Johnson*, a patient at Cape Fear Valley Hospital; Mrs. *David S. Royal*, injured in an auto accident last spring; *Roscoe Edwards*, hospitalized recently and now recuperating at home; to *H. J. Edmund's* mother; Jerry Stephens son of Mr. and Mrs. *B. F. Stephens;* Beverly Suggs, daughter of Mr. and Mrs. *L. H. Suggs*, and to retired Resident Engineer J. C. Parkin, a recent surgical patient in the Lumberton hospital.

CONGRATULATIONS to Machine Operator and Mrs. *F. C. Beal*, on the birth of a son, William Troy; and to the *R. W. Littles* on the birth of a daughter.

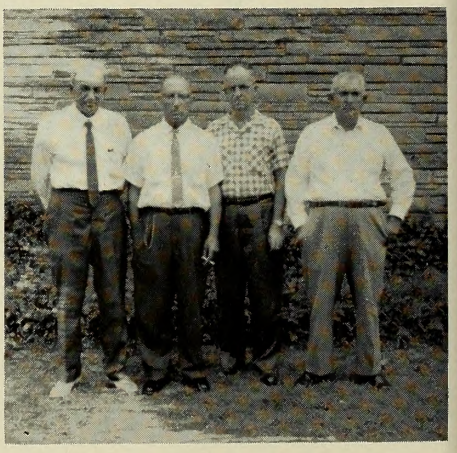
VACATIONERS include the *J. E. Laniers*, who spent a few days at Holden Beach; Maintenance Foreman and Mrs. *J. R. Cain*, who visited friends in Decatur, Ga.; Maintenance Foreman *H. K. Autry* who visited friends in Pennsylvania and Maintenance Foreman and Mrs. *W. P. Holland*, who spent a few days at Carolina Beach.

A GROUP of State Highway employees from Robeson County was entertained at a luncheon at Blanchard's Restaurant recently. Two of the honored guests were *James Deaton* and *N. J. Evans*, who retired under service retirement on July 1. The following were presented an award and pin for 35 years service: *N. C. McLeod*, *S. C. Britt*, *S. B. Malone*, *A. R. Wilkins* and *A. Q. Dew*. Other guests included *J. W. Spruill* and *K. C. Butler*, from the Division Office; *E. L. Green*, *R. McKeithan* and *H. G. Clark* from the Lumberton District Office.

SYMPATHY is extended to the family of retired Maintenance Supervisor *R. W. Howell*, who died recently; to *A. R. Wilson* in the death of his wife; and to the family of *L. C. Tanner*, who died in July. Mr. Tanner retired May 1 of last year due to ill health. He had been with the Highway Commission for about 15 years. Our sympathy also to *W. D. Butts*, who lost his father.

GLAD to have *J. A. Allen* back at work after being hospitalized.

BEST WISHES to Machine Operator and Mrs. *H. W. Johnson*, who have moved into their new home; and good luck to William B. Blackwell, son of the *Homer Blackwells*, who is now attending Campbell College.



These men in the Sixth Division were honored at a recent luncheon when they were presented 35-year awards by Division Enginer J. W. Spruill. Left to right: R. B. Allen, W. E. Tadlock, C. F. Holland and Mack Douglas.

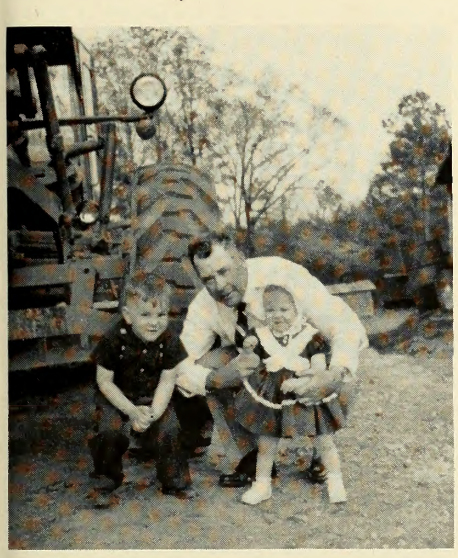
DIVISION SEVEN

By P. L. WELCH

Division Correspondent

UNIT OFFICERS of the Employees Association were reelected at a recent barbecue supper in the Greensboro Shop. They are: *C. C. Painter*, chairman; *J. O. Lambeth*, vice chairman; and *A. L. Coltrane*, secretary-treasurer. *J. B. Taylor* was elected to the newly-created post of second vice chairman.

DIAPER DATA—Congratulations to these proud parents, *Mr.* and *Mrs. J. V. Monti*, a daughter, and *Mr.* and *Mrs. W. F. Forgay*, a son.



A PROUD GRANDPA—Machine Operator John Dillon of Guilford County, poses with his pride and joy, grandchildren Keith and Carol Ann Dillon.

A SPEEDY RECOVERY is the wish of everyone for Mrs. E. E. DeVault, Elsie Walker, Mrs. Bryant E. Brewer, Beverly and Gay Tilley, Mrs. Charlie T. Wagoner, Martin Hamlett; and *F. E. Tutterow*, who is hospitalized following a heart attack. *Melvin Carter* and *Ed Owen* are back at work after a brief illness.

EQUIPMENT employees who have retired are: *Harman H. Hubbard*, Automotive Serviceman, retired March 31, 1960, after 10 years of service; and *Charles M. Welker*, welder, retired June 24 after 23 years of service. Also on retirement is Laborer *E. C. Lambert*, who retired July 1, 1960.

OUR SYMPATHY is extended to Mrs. Owen Satterfield, in the sudden death of her husband, who was a Machine Operator in Caswell County.

VACATIONERS from our Division headed in many different directions. The *J. B. Taylors* spent some time at Atlantic Beach and Morehead, while *Marshall Dailey* enjoyed a fishing trip in Virginia. *Dot Jackson*, her husband and son enjoyed a vacation at Carolina Beach, and the beach was the destination of Mr. and Mrs. *S. Malone Hall*. Myrtle Beach was the vacation spot of the *J. B. Cliftons*, while the *J. T. Martins* went to Kure Beach. *Julia Howard* and family spent a weekend at Carolina Beach, and the Jerry Bullards and *R. P. Coles* headed to Nags Head to enjoy the sun and sea. *Louie Madden* went to Chicago to attend a convention—The Moose, not the Republican! Mr. and Mrs. *E. E. DeVault* motored through the mountains of our State, as well as Tennessee, while the *Jesse Halls* grabbed fishing gear and headed for a choice spot in the eastern part of the State. *W. L. Byerly* visited relatives in Alabama; *H. M. Powell* spent a few days at Crescent Beach, and *J. O. Lambeth* took his family to the Outer Banks for a vacation. *Jimmy Joyner* and *Layton Gunter, Jr.*, spent two weeks at National Guard Camp and *G. C. (Jackie) Hall* was at Fort Jackson for two weeks reserve duty.

MOVING DAY was welcomed by *W. L. French*, who is quite proud of that new brick home in the Oregon Hill Community of Rockingham County.

CONGRATULATIONS to our newlyweds, Mr. and Mrs. *Ned Oliver Chapman*, who were married in June. The bride is the former Frances Leila Smith of Morganton. The groom is employed in right-of-way.

DIVISION EIGHT

By VIRGINIA S. WILLIAMSON

Division Correspondent

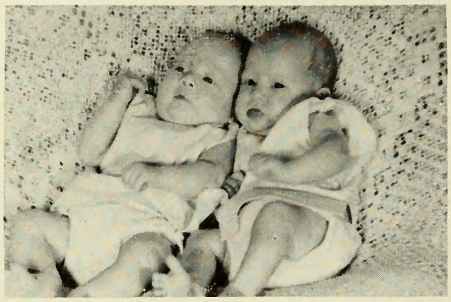
VACATIONS claim a big part of our news. Those vacationing include: *H. H. Jordan*, Assistant Division Engineer, with his wife and daughter Susan at Wrightsville Beach; *Joe Adams*, his wife and two young sons at Holden Beach; *Audrey DeLong*, secretary in the Office Engineer's Office, who spent some time at Crescent Beach with her husband and two young sons; Iva and Horace Teague spent a week in the mountains of North Carolina; the *Carl Ackers* enjoyed some boating and fishing at Morehead City; the *J. L. Bowman* family spent some time at the beach; District Engineer *John G. Hall* of Asheboro enjoyed a vacation and *Betty Thomas*, secretary in the Rockingham District Office, also took a vacation. Florida vacations were enjoyed by Office Engineer *Gentry Morgan*, whose destination was Miami; and by Right-of-Way Secretary *Janice Hemmens*, who took her children, Anne and Jimmy, to Daytona Beach.

GET WELL QUICK, *Douglas Patrick*, Landscape Department, recent patient at Hamlet Hospital, and Motor Grader Operator *E. G. Collier* of Hoke County, who has been in Veterans Hospital, Fayetteville. It's good to see *W. H. Darden*, Maintenance Supervisor, back at work after an extended illness.

UNIT 8 of the Employees Association held its annual meeting in Sanford re-



Patricia Ann Douthit, left, is the danghter of Machine Operator and Mrs. A. J. Douthit of Richmond County. She is a graduate of Rockingham High School and plans to pursue a career in medicine. Currently, she is attending Appalachian State Teachers College. Carrol Elizabeth Robinson, center, danghter of Maintenance Foreman Bob Robinson, plans an airlines career. A member of the class of 1960 at Mt. Gilead High School, she attended the summer session at Wingate College. Judy Carolyn Surratt, right, daughter of Mr. and Mrs. J. O. Surratt, graduated from Farmer High School, where she received the Betty Crocker FHA award. Her father works in the Equipment Department at Asheboro.

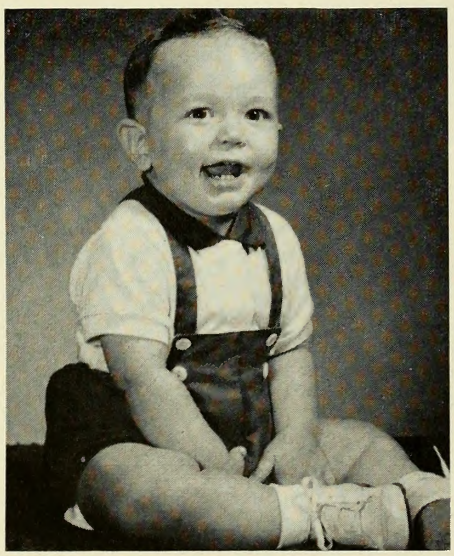


THE BOWLES GIRLS — Presenting Dawn and Deborah, or is it Deborah and Dawn? Anyway, they're the young daughters of Mr. and Mrs. James F. Bowles. Daddy is employed by Division 9 Construction Department.

cently and elected *Z. V. Tolar*, chairman; *Douglas Patrick*, vice-chairman and *Virginia Williamson*, secretary-treasurer. The Lee County Chapter held a barbecue supper and elected *J. L. Stewart*, chairman; *C. B. Groce*, vice-chairman and *Robert Weldon*, secretary-treasurer.

WELCOME to *Ted Austin* of Right-of-Way, who recently moved from Albemarle to Aberdeen, with his wife Betty and children Mark and Denise.

CONGRATULATIONS and best wishes to newly-weds, Sheila and Don Hammer of Siler City, who were married July 19, in Carthage Methodist Church. Sheila, daughter of Road Oil Supervisor *J. L. Riley*, will attend Woman's College this fall. The groom is connected with Harris Jewelers.



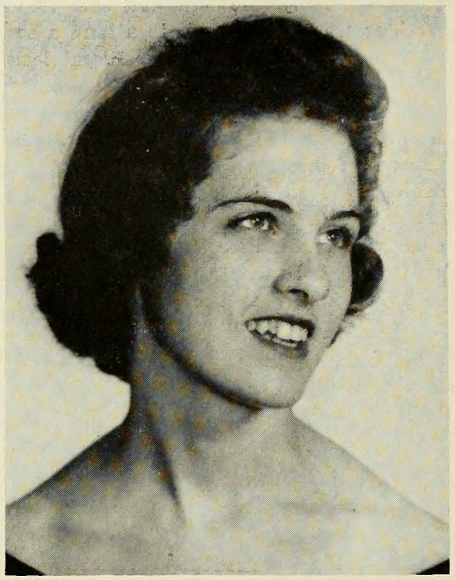
Edgar Morris Miller is the young grandson of E. P. Morris of Division 9, Construction Department. Young Ed will celebrate his first birthday soon and perhaps that's the reason for his big smile.

WE WILL MISS Machine Operator *S. T. Hill* and Maintenance Foreman *John M. Snead*, who retired July 1st, but we wish them the best of health and happiness in their retirement.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent



Myra Smith, daughter of Harry Smith of Division 9, Sign Department, graduated with honors from Walnut Cove High School. She was a member of the Beta Club and co-chief marshal.

DEEP SEA FISHING was enjoyed by Mr. and Mrs. *Ed Lewis* on their trip to Marathon and Key West, Florida. Ed says he caught a 54-inch dolphin but we haven't seen him showing any pictures yet.

AMONG the employees on vacation, we find *Joe H. Lowry*, who visited his brother in Boston; Sign Supervisor and Mrs. *O. K. Stephens*, who enjoyed a fishing trip at Lake Claytor; and Resident Engineer and Mrs. *W. F. Ray*, who spent two weeks in Tampa, Florida, where they visited friends and relatives. Resident Engineer *J. A. Kennedy* returned recently from Hot Springs, Arkansas where he visited his fifth and newest grandchild, Mary Kennedy.

NEW FACES in Right-of-Way are *Wayne C. Anderson*, recent graduate of the University of North Carolina, and *Roy N. Moore*, who comes to us from Greensboro. Anderson is an aide and Moore is Division Appraiser. Before joining the Highway Department, Moore was employed by the FHA as Senior Appraiser.

DEEPEST SYMPATHY goes out to the family of Truck Driver *James Walter Brown* of Stokes County, who died July 27th; and to *G. G. Turner* of the Construction Department, whose father, James A. Turner, died recently.

DIVISION TEN

By J. W. JONES

Division Correspondent

A CATFISH STEW at the *Dewey Starnes* cabin on the river was enjoyed by the *W. T. Smiths, Claude Ridenhours, Nathan Morgans* and *Ralph Fishers*. While on a recent fishing trip, *Dewey* lost a five pounder while his wife was getting the net, but naturally, she got the blame! *Joel E. Tucker* and *Claude R. Ridenhour*, along with their wives, have been enjoying some fishing and report nice catches.

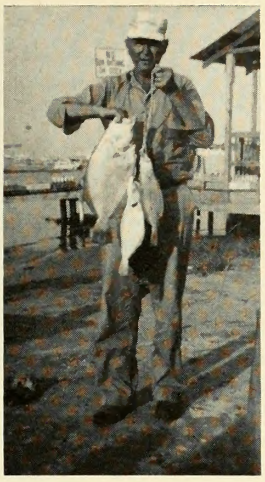
A VACATION in Orlando, Florida, was enjoyed recently by the *William V. Hudsons*.

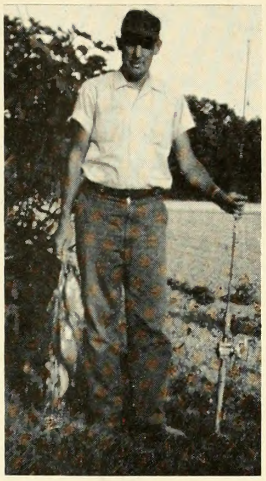
CABARRUS COUNTY Maintenance Employees, along with Prison and Motor Department, gave a delightful fish dinner with all the trimmings recently. Honored guests included Commissioner J. Lee White, Chairman W. Frank McCray of the Cabarrus County Commissioners, and the following County Commissioners: M. S. Lyles, L. Bowman Barrier, P. E. Stallings and W. Guy Isenhour.



Mrs. James Kenneth Porter, prior to her July 8 marriage was the former Sue Linker, daughter of Truck Driver and Mrs. Albert Linker of Concord. The groom is the son of Mr. and Mrs. James Porter of Indian Trail.







FISHING WAS GOOD—Joe Thomas, Dong Sasser and James Earnhardt display their catch at Cherry Grove Beach. (Their wives are responsible for some of the catch). Thomas and Earnhardt work in the Tenth Division Sign Department and Sasser is employed in Road Oil. Dewitt Green (center photograph) had good luck at Cherry Grove also. He displays a fine string of flounder taken at the inlet with a spinning outfit and four pound test line. On the right, J. P. Thomas shows off the string of crappie, taken in a short while from the Catawba River.

OUR SYMPATHY goes out to *S. A. Faulkner*, in the recent death of his wife; and to *F. F. Morgan*, whose brother died recently.

DIVISION ELEVEN

By CORA LEE GREER

Division Correspondent

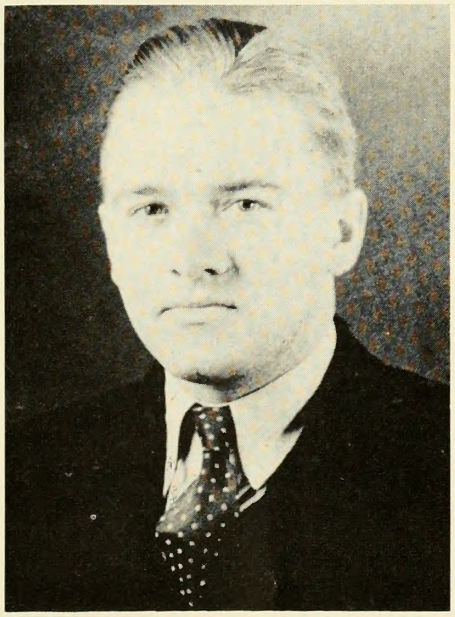
GET WELL WISHES are extended to the following who have had extended illnesses: *J. L. Caudill, Claude Woods, J. G. King, R. W. Brown, Efird Day*, and *Grady Hayes*. Those returned to work are: *L. R. Kiger*, and *Don Wiseman*.

CONGRATULATIONS to Mr. and Mrs. *A. Q. Hartsoe*, on the birth of a son, July 20.

FLORIDA is the new home of *Patricia Pearson Nance*, who has resigned her position in the Elkin office, and moved with her husband and baby to Miami. *Martha Jean Pearson*, who also worked in the Elkin office, resigned to enter X-Ray Technician School at Cabarrus Memorial Hospital in Concord. Good luck, Martha! *J. M. Gwyn* has taken a job with Troy Smith, Contractor, in Mount Airy. *Clarence Smith* is now Resident Engineer at Elkin, replacing *R. M. Bradshaw*, who was promoted to District Engineer.

OUR SYMPATHY goes out to the *Don Wiseman* family, on the death of his father on July 28.

VACATIONERS INCLUDE: District Engineer *R. M. Bradshaw* and family who took a short trip through Cherokee, Gatlinburg, Tenn., and the Smokies. *T. E. Gwyn* and family spent a few days at Myrtle Beach and the *Bill Pendletons* also vacationed at Myrtle Beach. Mr. and Mrs. *Clark Ellis* vacationed on the Outer Banks. The *J. T. Winklers* spent their vacation in Washington, D. C., and Jody and Jim Swofford and young son visited the *Jimmy Doughtons* for several weeks.



G. P. Price, Highway Inspector III, in Division 11, died suddenly at his home on Saturday, July 9. He began his service with the Commission as a rodman in 1927. Surviving are his widow and one son George Jr.

DIVISION TWELVE

By JEAN CLINE

Division Correspondent

FOOD AND FELLOWSHIP was enjoyed by some 200 Iredell County employees, their families and guests who attended the picnic on July 22. There was fried chicken and all the trimmins, including all types of homemade desserts. Entertainment was furnished by the Sprinkle Quartet and a trio of young ladies.

A POPULAR BEACH lost four annual customers—Maintenance Supervisor and Mrs. *L. D. Gaither*, Larry and Sandy, when the family acquired a cabin on the Catawba River.





G. L. Allen of the Landscape Department, and Mrs. Allen are the proud parents of these youngsters. At the left is Terry Lenn, who is three years old. The newest member of the family is Timmy Lee, right.

THE BLOODMOBILE visited Iredell Camp recently. Maintenance employees who donated blood include *W. G. Myers, M. C. Pharr, J. P. Morrison, W. W. Sherrill* and *C. E. Somers*. Contributions by prisoners brought the total to around 50.

AREA FOREMAN *J. B. Murdock's* young grandson from Mt. Airy was paying him a summer visit when he was painfully injured as a car struck his bike.

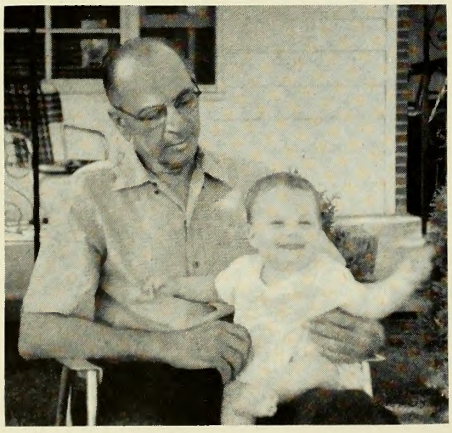
A SPEEDY RECOVERY is wished for *Walter Ledford*. Others who have been on the sick list are: Mrs. *J. B. Robinette*, Mrs. *J. W. Fox, J. F. White's* son, Gerald Ray; *P. B. Bentley's* daughter, Charlene; Mrs. *C. H. Eury*, Vickie, daughter of *J. O. Clapps;* Mrs. *F. H. Flinchum*, Mrs. *W. C. Pharr*, Mrs. *J. H. Westmoreland*, Alvin, only son of *H. H. Austin*; and Mr. and Mrs. *T. H. Granfill*, who suffered foot injuries when they stepped on nails. We are happy to have Sign Supervisor *Clyde G. Poston, Jr.*, back at work after a three-week illness.



TWO REASONS for Truck Driver C. L. Allen's big smile are shown here. They are: Tammy, 9 months, and two-year-old Elaine.

ON THE GO—*Ray Davis* and family vacationed at Crescent Beach; Resident Engineer and Mrs. *W. A. McNeill* enjoyed their visit with relatives and friends in Georgia; *J. A. Spangler* and family vacationed in Miami, Fla.; *Donald Reavis* of Statesville Residency spent a week in Florida and *Clyde Moore* and family report fishing was poor, but the water fine, on a recent trip to Carolina Beach.

RECENT GUESTS in the *E. L. Kemper* home were their youngest son, Dick, his wife and son Barry, from Wichita, Kansas. This was young Barry's first trip to

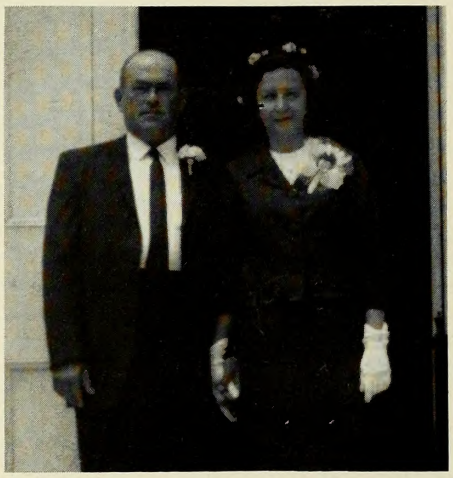


Meet little Debra Ann Miller of Summit, N. J., who is being admired here by her grandfather, District Engineer P. D. Miller. The pictnre was made on Debra's first visit to the Tar Heel State.

Shelby. Road Oil Supervisor *Erwin Champion* spent two weeks on reserve encampment at Fort Jackson. Maintenance Supervisor *P. J. Corpening's* son is at Fort Sill, Okla., for six months military training. A recent graduate of Clemson College, Alex will return to his position with the Ferro Corporation, Cleveland, Ohio, upon his release from service.

CONGRATULATIONS to Mr. and Mrs. *Gibb Bowles* on the birth of a daughter, Cynthia Ann, on April 20, and to the *Bob McLains*, on the birth of a son, Terry Lynn, June 22.

ALLEN ACRES is the new home of the *Carl Allens*, and *H. I. Tomlin* and family have moved from near Olin to their home on Rt. 21 near our District Office. The Tomlins recently purchased the house from D. C. Shumaker.



John R. McKee (Charlotte Maintenance Department), and his bride, the former Virginia M. Nance, are shown leaving Providence Presbyterian Church following their June 5 marriage.

SYMPATHY is extended to Assistant Division Engineer *W. W. Wyke*, in the death of his father and to *Lester Smith* of District 1 in the loss of his mother.

A WELCOME is extended to *Milton Phillips*, a new member of the Construction Department in Shelby; and Paul B. Bunn, new Right-of-Way Aide. Recent welcome visitors in the Division office were *Sam Badgett*, *Fred Parker* and *Layton Gunter* from Raleigh.

THE RETURN of baseball to the Statesville area has aroused many new fans. Among them are *Jimmy Sprinkle*, *Gibb Bowles*, *Charles Mauney* and sons Billy and Dickie, who attend the night games. Billy has been playing on the Statesville Little League.



Mr. and Mrs. Hobson Russell Polk are shown following their June 10 marriage in Wilson Grove Baptist Church. The bride is the former Shirley Reid Houston. The groom, son of Mr. and Mrs. M. H. Polk, is employed in the Charlotte District Office.

SEEN AND HEARD: Iredell County Refreshment Committee doing a lot of squeezing (lemons, that is) for all the lemonade consumed at the picnic; Foreman *J. Frank Morrison* and family enjoying their recently-purchased car; *R. W. Connolly* becoming a boating enthusiast; *Lois Knox* making weekly trips to Chapel Hill to visit her sister who has been quite ill, but is improving now.

BACK AT WORK after recent illness are *Earl Current* of the Statesville Construction Residency and *T. E. Blanton* of the Sign Department.

THE NATION'S CAPITAL was visited by the *C. G. Poston* family during their vacation; *T. G. Brooks* and family spent a week in Florida; and the *P. J. Corpenings* divided their time between their cabin at Lake James and her old home in South Carolina.

DIVISION THIRTEEN

By DAN TURNER

Division Correspondent

CONGRATULATIONS to District Engineer *B. S. Connelly*, who has a new granddaughter. The parents are Mr. and Mrs. Johnny Connelly, of Salina, Kansas, where he is stationed with the Air Force.

VACATIONERS include Material Inspector *W. H. Stevens*, who visited his



Mrs. Benny Rodell Russell is the former Patricia Lee Boggan, daughter of Mr. and Mrs. Harry L. Boggan of Albemarle. Her marriage to Mr. Russell, son of Mr. and Mrs. B. C. Russell also of Albemarle took place July 2 at Stony Hill Methodist Church. The bride's father is employed by the Construction Department in Division Ten.

son in Jacksonville, Fla.; the *J. S. Warrens*, who spent a week at Myrtle Beach and *Ed Y. Tipton*, Mitchell County Maintenance, who went to Nags Head.

WELCOME BACK to work, Foreman *H. Page Hinter*, and *Charlie Miller* and *Roland Peek*, both of the Maintenance Department, who have been absent because of illness.



Mrs. Stanley Blanton Walker, prior to her recent marriage, was Miss Frances Anne Selvey, daughter of Machine Operator and Mrs. Winslow U. Selvey of Rutherford County. The couple will make their home in Birmingham, where the groom is employed by the American Bridge Division of U. S. Steel.

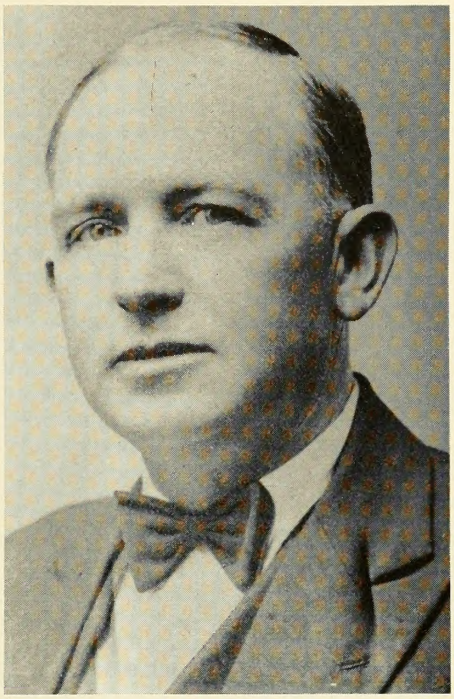
DIVISION FOURTEEN

By D. V. RAXTER

Division Correspondent

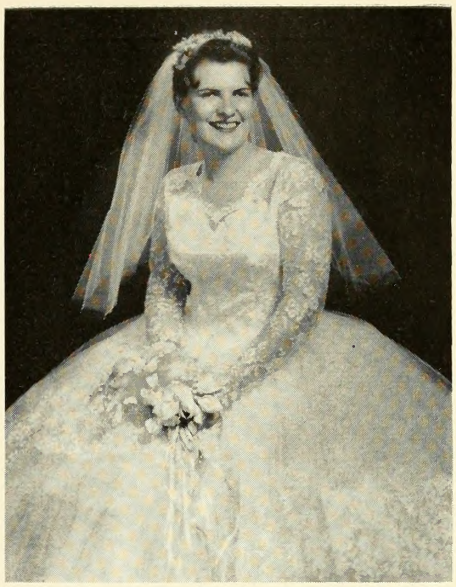
OUR DIVISION was saddened by the recent death of Road Oil Supervisor *D. E. (Gene) Hyatt*. He had been employed by the Highway Commission since 1933. Our deepest sympathy to his family, and to *B. R. Walters* of Robbinsville, in the death of his mother recently.

CONGRATULATIONS are in order for Truck Driver and Mrs. *Harve Lance* of Clay County, on the new addition to their family.



RHINEHART RETIRES—Among the old-timers retiring in 1960 in Division 14 was V. R. (Rhiney) Rhinehart, whose retirement in May ended a 39-year career in Highway work. He began work in Haywood County in the Maintenance Department under the late M. L. Hooper. About a year later, he transferred to Jackson County Maintenance under Will Morgan. In 1925, he transferred to Buncombe County as an apprentice mechanic with the late R. D. McCurrey at Biltmore, returning to Haywood in 1928 as a section foreman in the Maintenance Department.

A farmer and cattle trader, "Rhiney" will have more time to spend on his farm in Haywood and Jackson Counties and in Greenville, S. C. He has seven children by his first wife, the late Eva Hooper. His present wife is the former Mildred Burgess, of Haywood County.



The marriage of Miss Mary Frances Page and Charles Bailey Rucker Jr., was solemnized June 4, in the First Presbyterian Church, Lebanon, Tenn. The bride is the daughter of Mrs. George Guess Page of Sylva, and the late Mr. Page, who was Fourteenth Division Engineer prior to his death.

GET WELL WISHES are extended to *Ray Bishop*, Jackson County Supervisory Foreman, who was hospitalized recently; Machine Operator *Alvin Moore's* mother; to Truck Driver *Gudger Bishop's* wife, and to *Arlin McClure* of Clay County, who was hospitalized recently.

THE WELCOME MAT was rolled out for *Don McCracken*, a new member of the Right of Way Department, who comes to us from Boone. Don has a wife and daughter.

GO WEST! That's just what the *Henry Ledbetters* decided to do on their vacation, and report a most delightful time in Wyoming.

COME UP for a fish fry, but bring your own fish! This is the word from *Jack Baldwin*, whose reward on a recent fishing expedition was—one 19-inch Rainbow Trout!

Improvement of Ethopian roads has resulted in incredible changes in communications in that country; for instance in 1953 a truck could go from Wondo to Dilla in dry weather in nine days, in the wet season in about a month, but since improvement of the road, can now make the run in two hours.

Highway Study

(Continued from page 4)

Note—National highway statistics are based on the 1958 figures which are the latest available from the US Department of Commerce.

IN SUMMARY

In this report and in the plans for specific highway improvements, the initial step has been the establishment of what is felt to be reasonable and rational levels of highway service for the various systems. Secondly, the entire highway system has been analyzed in terms of these service levels and project improvements have been recommended for inadequate highway sections.

Based upon this study and the costs of recommended projects, it is estimated that the State Funds necessary to finance highway operation for the period 1960 to 1975 will be $2,417,500,000. Revenue estimates over the same 15-year period, based upon the present Highway Fund tax structure, will be approximately $1,912,500,000.

If North Carolina is to meet the growing public demand for improved highway facilities and is to satisfy the demonstrated need for such improvements, an additional $505,000,000 will be required during the period 1960 to 1975. This represents an average annual need of $33,600,000 for each year between now and 1975.

North Carolina is presently investing 20 to 25 percent less funds for highway purposes than the national average. This investment deficiency will be felt to a much larger degree during the next 15 years as the impact of the motor vehicle combined with urbanization, industrialization, and agricultural progress, place a greatly increased strain on our highway and street systems. Public clamour for a progressively more efficient highway transportation network will increase and will be justified.

North Carolina's lower annual highway investment may be explained by the facts that:

1. North Carolina is responsible for all public secondary roads, whereas in most States support for this system is financed in part through local county property taxation.

2. Motor vehicle registration fees for private passenger vehicles are lower in North Carolina than in most States.

3. Historically, the entire State Prison operation in North Carolina is financed from road user taxation, drastically reducing the amount of money available for highway improvements while at the same time increasing the annual maintenance cost on the North Carolina Highway System. At the present time North Carolina utilizes over 6,000 prisoners per day for routine maintenance operations. Though use of Prison labor in routine maintenance can be substantiated in part, modern mechanization, with elimination of much hand labor, would result in more efficient maintenance at reduced cost.

It is felt that the State Highway Commission should retain responsibility for secondary roads, because in this manner a more efficient and coordinated road system may be developed and maintained. In addition State responsibility for these roads avoids duplication of administrative functions and overhead costs.

It is recommened that serious consideration be given to steps which would eliminate diversion of Highway Funds for non-highway purposes. Further it is recommended that serious consideration be given to steps which would lead to increases in Highway Fund revenues to enable the State Highway Commission to provide these levels of road service which are considered rational and, indeed imperative, for the future progress of North Carolina and her people.

There are more than 150 pages in the report, including charts projecting rising costs of maintenance and other overhead expenses, as well as maps. The report has a light green cover, with darker green lettering and binding.

The work on the report was supervised by Director Babcock, while the Planning Department gathered much of the statistical background, and basic planning work and drafting was handled by the Advance Planning Section, headed by R. J. Kimley. Data on Secondary Roads was secured through 14 Division and 33 District Highway Engineers, and compiled in the Secondary Roads Department, while survey and improvement recommendations for structures on the highway systems was handled by the Bridge Department.

Other credit for work on the report goes to the Finance Department, which compiled and prepared financial data; to the Public Relations Department, for its writing, format and supervision of printing; to the Reproduction Section, where the entire report was published, to the U. S. Bureau of Public Roads for its cooperation, and last, but not least, to the many secretaries who typed and proofed the report.

Efforts Made To Reduce Accidents On Rocky Mt. By-pass

Efforts are being made by the Traffic Department to reduce the accident toll on the US 301 bypass of Rocky Mount.

During the 5 years that the road has been open, the accident toll has been unsually high. Traffic Engineer R. A. Burch has installed a large advisory speed sign in the areas where the acident experience has been highest. The Commission has been working cooperatively with Nash and Edgecombe County Boards of Commission in an effort to lessen the accident toll.

This is a good example of a relatively new bypass with no control of access. In the span of 5 years, the bypass has become almost a business street with numerous turnouts, grade intersections and roadside development. Though it is difficult to find a general pattern in the accidents, it is apparent that most motorists feel they are on a safer road than is actually the case and it is hoped that advisory speed signs will help.

Salesman of high-priced car talking to prospect: "Driving is virtually effortless, leaving your entire mind free to figure out how you will meet the payments."

Two political candidates were having a hot debate. Finally, one of them jumped up and yelled at the other: "What about the powerful interest that control you?"

And the other guy screamed back: "You leave my wife out of this."

"You're terribly extravagant," the husband told his wife. "If anything ever happened to me, you'd be forced to beg."

"I'd get by," she answered. "Look at the experience I've had."

Editoral Comments On Highway Needs Study

Editorials have appeared in many of the State's leading newspapers, concerning the recently-published long range highway needs study.

THE ROCKY MOUNT TELEGRAM:

"The North Carolina State Highway Department is to be congratulated on its far-reaching report which projects North Carolina's road needs for the next 15 years.

"The report, which is being considered by the State Highway Commission, provides the State with a panoramic view of our road system and its needs for the next 15 years. Instead of providing for a year-to-year basis, one in which we never catch up to existing needs, the long-range report specifies just what is needed in terms of money, new roads, planning and maintenance."

THE ASHEVILLE CITIZEN:

"The State Highway Department is to be congratulated on its extremely lucid report projecting North Carolina's highway needs over a period of the next fifteen years.

"A long-range analysis of this kind is necessary and valuable in an era when the use of roads is constantly increasing. It can save taxpayers millions of dollars through making possible earlier right-of-way purchases and by eliminating overlapping and costly reconstruction. Furthermore, by setting definite building priorities, it gives local businessmen a green light to proceed with shopping centers, housing developments and other projects which depend on the proximity of good roads.

"The program set forth in the Commission's report is a sound one based on thorough and careful surveys, and is a minimum proposal for North Carolina's highway growth in the next fifteen years. Its financing will have to be worked out either by relieving the Highway Fund of the cost of some non-highway operations or by increasing revenues in some form or other. The Commission points out that motor vehicle registration fees in North Carolina are lower than in most other states, and an increase from this source might well be investigated."

THE FAYETTEVILLE OBSERVER:

"If you drive your car a thousand miles a month and average fifteen miles per gallon, the cost of these improvements to you, as a car owner, would be just under two dollars per month.

"Offhand, we'd say as a rule of thumb, the additional cost of the total proposed program would cost vehicle owners approximately $24 per year per vehicle, based on a 15-mile per gallon experience, varying higher or lower with the gasoline consumption of the particular vehicle.

"We expect the several thousand people who live in Fayetteville and work at Fort Bragg would consider this cost a cheap price to pay for any system which would cut in half the twice-daily traffic congestion they experience to and from work."

THE WILMINGTON NEWS:

"The report on a three-year study of North Carolina highway needs for the next 15 years, revealed by the State Highway Commission last week, offers a definite challenge to Wilmington interests concerned over improvement of the north-south and western roads to and from the city.

"In listing definite projects, the Highway Commission has provided new hope for the improvements Wilmington and the region desire most. But those hopes will be of little value unless Wilmington shows greater interest in highway improvements directly related to its well being.

"Remember, we will be in a competitive position in the state-wide $2.4 billion program. Other cities and areas will be fighting hard for projects favorable to them. And there simply isn't enough foney, based on the present revenue structure, to build all the improvements.

"So, let's accept this challenge.

"That acceptance lies in an immediate start at City Hill, the Courthouse, Chamber of Commerce and among other civic interests on planning and action to obtain, as soon as possible, the projects Wilmington needs so badly to raise its highways to modern standards."

THE WINSTON SALEM JOURNAL:

"Many of the proposed projects will amount to nothing more than 'ribbons of moonlight' unless the State can scrape up more funds for highway construction.

"This is because the present highway fund tax structure, according to the Commission's projections of income from both State and federal sources will furnish only about $2 billion of the amount needed to complete the 15-year program.

"The report reflects a thorough job of planning by the Highway Commission. It is an extensive application of the highway foresight for which the State is noted and which has served the highway-using public so well. Highway construction is not a one-shot proposition, but a continuious program. And advance planning as to needs and costs is essential to its success, especially in a time of changing living patterns and transportation habits. By discovering the number, location, and types of new roads that the State wants and needs and establishing construction priorities, the Highway Commission is in a better position to lead the people to accept the costs.

"Any attempt to raise the State highway tax, must be viewed in the light of the federal gasoline tax. The federal tax now stands at four cents per gallon. It was raised to that level last year when Congress added one cent to help the Interstate highway program over a financial crisis. Meanwhile, President Eisenhower is seeking an additional half-cent to further bolster the federal highway fund. The chances are that even higher federal gasoline levies will be sought in the coming years. The rise in the cost of highway construction is pinching the federal as well as State government.

"The question then is how far the State Federal governments can go in adding to the gasoline tax before it reaches a point of diminishing returns.

"As for eliminating the diversion of highway funds to non-highway purposes, this would produce some additional funds for highway construction, but only a small proportion of the $34 million additional a year the 15-year program will need.

"This is not to say that the State of North Carolina cannot find the additional money to carry out the proposed 15-year highway program, described as a plan to provide "an efficient, minimum highway system. . . without excessive frills.' But it is to point out some of the difficulties the Highway Commission will encounter when it gets around to considering steps to increase highway fund revenues.

"The Highway Commission has indicated it will study the report at length before making specific recommendations for financing the program. Such diligent study is warranted if some of the 'moonlight' in the report is to be turned into usable ribbons of asphalt and concrete."

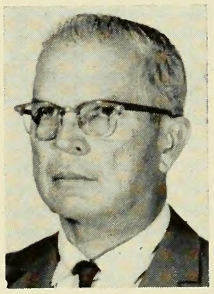
Gunter, Powell, Amerson, Corwin Are Promoted

Four men were promoted recently to fill positions left vacant by recent retirements.



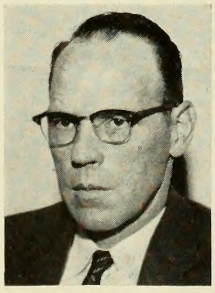
GUNTER

Layton Gunter, 52, has taken over the duties of State Maintenance Engineer, replacing B. W. Davis, who retired recently after 40 years with the Highway Department. A native of Chatham County, Gunter moved up from the assistant maintenance engineer's post. He dates his highway service from 1926 and has served as engineer on bridges, road construction and maintenance since that time. For 16 years he was district highway engineer for Alamance, Caswell and Orange Counties. Gunter is married to the former Margaret Ruth Irving and they have two children.



POWELL

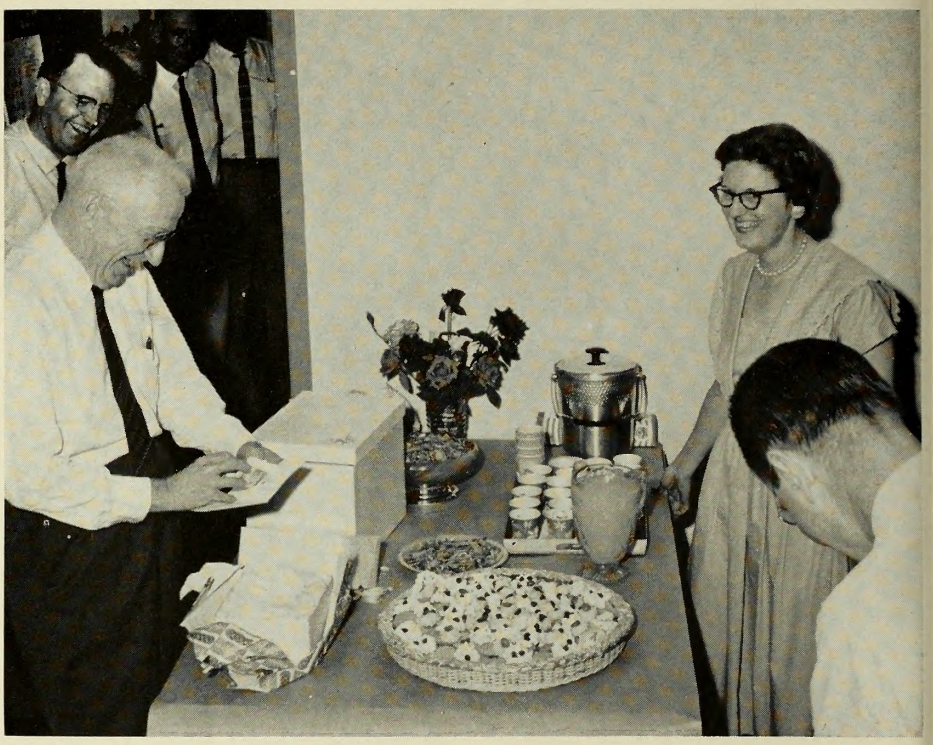
Joe J. Powell has replaced C. B. (Buck) Taylor as State Bridge Maintenance Engineer. Powell, 57, joined the Highway Commission in 1925 and for more than 25 years has worked in the bridge department supervising construction. He is a graduate of State College and is married to the former Eleanor Moore of Frankfort, Ky. They have two children.



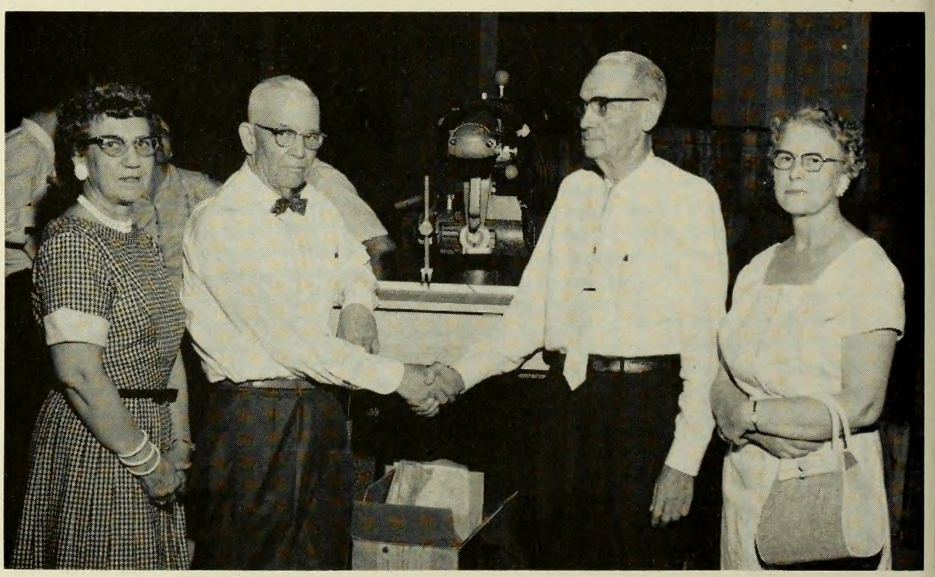
AMERSON

Thomas L. Amerson is now assigned to the Finance Department and will handle employee payrolls and employee group insurance benefits. He replaces H. K. Witherspoon whose recent retirement ended 41 years of continuous highway service. Amerson, 50, joined the Highway Department in

Retirement Parties Honor 4 Men



Retiring Maintenance Engineer B. W. Davis, opens one of the presents at his retirement party. Davis received a transistor radio and an electric drill. Looking on is Mrs. Ethel B. Jones, who was secretary to Davis for over 25 years.



Retiring Bridge Maintenance Engineer C. B. (Buck) Taylor, second from left, shakes hands with State Bridge Engineer T. B. Gunter, Jr., at the party given in honor of Taylor. Looking on are Mrs. Taylor, left, and Mrs. Gunter. Bridge Maintenance employees presented Taylor with a radial arm saw, for which he will find many uses in his woodworking shop.



H. K. Witherspoon, a veteran of 41 years with the Highway Department, admires the portable television set presented to him at a surprise party. Employees also presented him with a slide projector.



L. Polk Denmark is all set to spend his days fishing, with all the equipment presented to him by fellow employees in the Planning Department.

1958. Prior to this time, he served as comptroller at Carolina Hardware Company in Raleigh. Amerson is married to the former Johnsie Bornemann of Raleigh and they have three children.

Donald E. Corwin has replaced L. Polk Denark as cartographer. A native of Waynesville, Corwin attended State College and has worked in the Highway Planning Section for the past 6½ years. Corwin, 28, is married to the former Lula Hunter of Spencer and they have two sons.

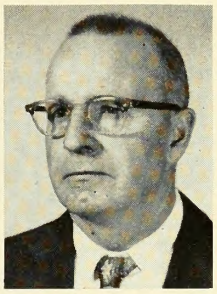


CORWIN

Division Four Promotions

R. W. Dawson is the new Assistant Division Engineer in Division Four, succeeding T. D. Grantham, who retired August 1.

A native of Jacksonville, Dawson's highway service dates to 1932, when he joined the department as Rodman. Since that time, he has served as Inspector, Maintenance Supervisor and Road Oil Supervisor, before taking over the duties of District Engineer in 1949. He is married to the former Mildred Winstead and they have three daughters.

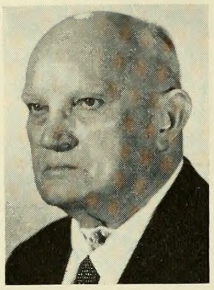


DAWSON

J. Irving Lynch, Jr., is the new District Engineer, with headquarters at Goldsboro. A native of Clinton, Lynch joined the Highway Department in 1949. He is a graduate of State College and prior to joining the department, was employed as a supervisor for the Motor Vehicles Department. He is married to the former Marjorie Carter and they have two daughters.



LYNCH



GRANTHAM

Grantham retired after 29 years of highway work. During this time, he served as Concrete Inspector, Gang Foreman, Maintenance Supervisor, District Engineer, Resident Engineer and Assistant Division Engineer. His wife is the former Betty Parham and they have one daughter.

Office Moves From Wadesboro To Albemarle

The Tenth Division's District One office has been moved from Wadesboro to Albemarle.

The move brings the District One office to a more central location within the three counties comprising the district. The District Office is located in the same building occupied by the Division Office, which is at 716 W. Main Street in Albemarle.

District One comprises Anson, Stanly and Cabarrus Counties and is headed by District Engineer C. R. Smith.

Outer Banks Road Is Placed On Fed. Aid System

After inspection of the Outer Banks Road, from Nags Head to Hatteras Inlet, the U. S. Bureau of Public Roads has agreed to place the road on the Federal Aid System. Previously, it was on the Secondary Road System and all construction improvements were taken from State funds.

The road offers access to the National Seashore Park and vacation spots along the entire northern Outer Banks. The trip was made in late August by Highway Director W. F. Babcock, Rex Anderson, Southeastern Bureau of Public Roads engineer; L. S. Coy, Division Engineer, the Bureau of Public Roads for North Carolina; and Division One Highway Engineer W. N. Spruill.

Completion of the Alligator River Bridge, now under construction, and the Oregon Inlet Bridge, approved, but not let to contract, will provide better access to the entire Outer Banks area.



A tip of the hat to these Supervisory Foremen of the Twelfth Division, whose combined service with the Highway Department totals more than 150 years. Left to right: Charles Ervin Noggle, Cleveland County; J. D. Bebber, Alexander County; I. B. Curlee, Iredell County; H. E. Dellinger, Lincoln County; J. B. Murdock, Catawba County and L. F. Carpenter, Gaston County. Noggle joined the department in 1935. He and his wife, the former Annie Mae Bobbitt, have two children. Bebber's service dates back to Nov. 14, 1932. His wife is the former Evelena Price and they have one son. Curlee is one of our 30-year men, and he and his wife have three children. Dellinger joined the department in 1931, in his native Lincoln County. He and his wife are members of Reeps Grove Methodist Church. Murdock is a veteran of 26 years service. He and his wife have two sons and a daughter. Carpenter worked in Division 9 prior to coming to Division 12, and now has 24 years to his credit. He and Mrs. Carpenter have a son and a daughter in college.

H'wy Commission Sets Wilmington Hearing

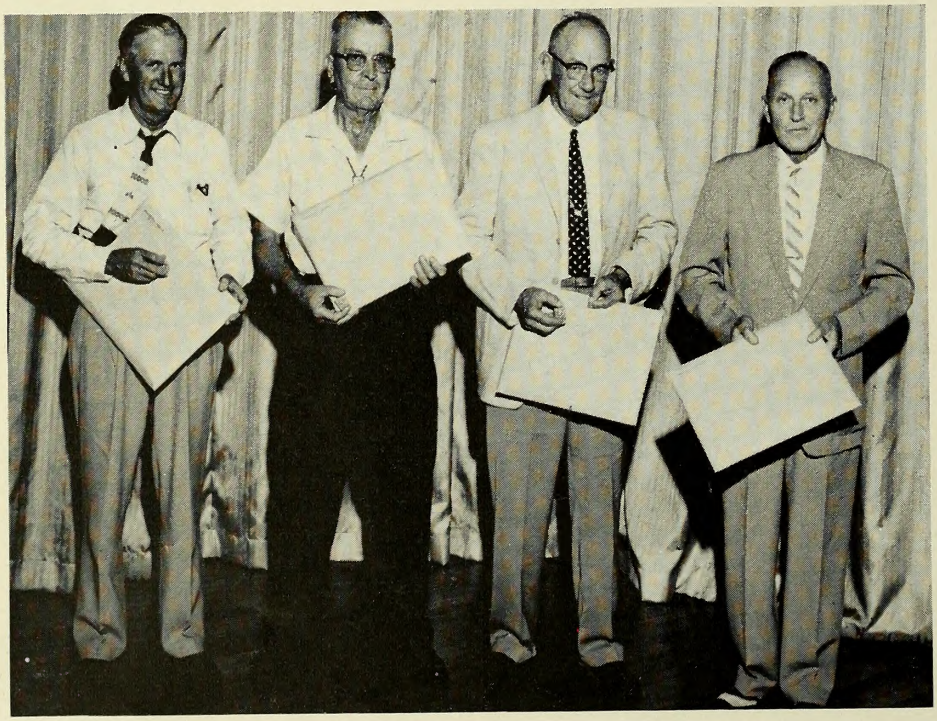
The full Highway Commission will journey to Wilmington for a public hearing Friday, October 7, on the various bridge proposals and the thoroughfare plan for the city.

Under consideration will be two proposed crossings of the Cape Fear: one near the location of the present bridge, and another, to the south, tying in with Dawson Street.

Cost estimates place the north bridge at slightly over $10 million, while the Dawson Street crossing is estimated at over $19 million.

The public hearing will follow a 2-day session in Raleigh on October 5 and 6, at which time the Commission will be meeting with Division Engineers to set up projects for construction during the next several months.

The Wilmington public hearing is slated for Thalian Hall at 10 A. M., on October 7th.



These men in the Bridge Maintenance Department were honored recently for 35 years of service. Left to right: J. S. Pope, Bridge Foreman, of Halifax; J. H. Rosser, Bridge Foreman of Wilson; J. J. Blevins, Bridge Foreman of Spruce Pine and K. R. Scott, Assistant Bridge Maintenance Engineer located at Raleigh.

"Donna" Damage To Roads May Top ½ Million

Preliminary estimates pouring into Highway offices as ROADWAYS went to press indicated that road damage from hurricane Donna would be at least half a million dollars.

Most serious damage to highway facilities from the passage of the hurricane was reported in New Hanover, Carteret, Dare and on the Albemarle Sound bridge connecting Chowan and Washington Counties.

Damage was also heavy on secondary roads in Bladen, Columbus and Brunswick Counties.

A large portion of the causeway from Beaufort to Morehead was ripped apart with much of the west-bound lane of US 70 gone. The tracks of the Beaufort-Morehead Railroad close by were also destroyed.

Highway crews went to work immediately in clearing broken pavement, debris and houses, and stone was being shipped in to restore two-way traffic as quickly as possible.

The road between Salter Path and Emerald Isle was cut in half in a dozen places and required major repair. Town streets in Atlantic Beach were also broken or covered with sand and debris. NC 24, west of Morehead, in the vicinity of Swansboro, was closed temporarily by a bridge washout, and approaches to the North River Bridge on US 70 in Carteret were washed out. None of the bridges in Carteret were damaged.

Apparently the biggest bridge damage was on the Albemarle Sound Bridge, which was severely damaged. One piling was completely washed away and up to 50 others were severely damaged. This occurred when a 1¾ mile section of the Norfolk and Southern Railroad bridge broke loose some 8 miles upstream and floated down against the highway bridge. Within 24 hours, after passage of Donna, a tugboat had arrived to begin clearance work.

Old US 158 on Nags Head was closed by high water but the recently-completed bypass remained open for Outer Banks travel. Also, there was a little damage to the road on Hatteras Island.

Steel landing mats on 3 miles of the Ocracoke road were displaced as water covered much of upper Ocracoke Island. The 6 miles of hard-surfaced road leading into the village of Ocracoke was cut in several places and travel from the village to Hatteras Inlet was disrupted.

While repairs to the road and replacement of the landing mats is underway, the ferry across Hatteras Inlet was placed on a two round trips per day basis. The Hatteras Inlet ferry was operating from Silver Lake, rather than from the north landing dock, thus bypassing the damaged portion of the Ocracoke road.



The west-bound lane of US 70 on the causeway between Morehead and Beaufort was badly undermined from water and wind. Two-way traffic was restored by placing stone on the south shoulder of the road while major repairs are being made.

Division Engineer W. N. Spruill said that ferryboats would be stationed at Ocracoke and Hatteras and 1 round trip per day would be scheduled from each side of the inlet.

Two days after the storm struck, all major roads in eastern North Carolina were reported open, but washouts of secondary roads brought school closing in many areas.

Highway Director W. F. Babcock had high praise for personnel throughout the storm-struck area, who worked around the clock in clearing roads and beginning the major job of overhaul and repair.

"As usual, our people came through with flying colors," said Babcock. He credited the quick opening of highway facilities to the speed and efficiency with which employees went at the job.

Mr. Babcock and Assistant Chief Engineer Ivan Hardesty left Raleigh just after the hurricane struck in the Beaufort-Morehead area and toured much of southeastern North Carolina. Chief Engineer C. W. Lee, Assistant Chief Engineer Hunter Irving and Hydrographic Engineer W. S. Winslow joined Division Engineers on the spot for conferences and planning for immediate road repairs.

General concensus of opinion was that while Donna was extremely destructive in scattered sections, damage could have been much worse if the storm had moved through at a slower forward speed. Most hurricanes move forward at between 8 and 14 miles per hour, while Donna sped along at from 35 to 40 miles per hour. Such a forward pace decreased the normal amount of rainfall expected with a hurricane and kept flooding down in some areas, but the high velocity of winds made up some of the difference in destroying homes, businesses and roads in the eastern part of the State.



Here is a construction shot on the Raleigh-Beltline near Meredith College. Contractors on the project for grading and structures are James T. Triplett, Inc., of Chester, S. C., and Ray D. Lowder, Inc., of Albemarle, whose joint bid on the work was $1,620,000. This is the first section of the Raleigh Beltline to be let to contract. When another section is let during the latter part of this year, pulling from US 70 to US 1 north of Raleigh, this will complete a portion of the Beltline, providing a US 1 bypass of Raleigh, and leave Rockingham as the only city in the State through which US 1 still passes.

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State Highway Commission
Raleigh, N. C.

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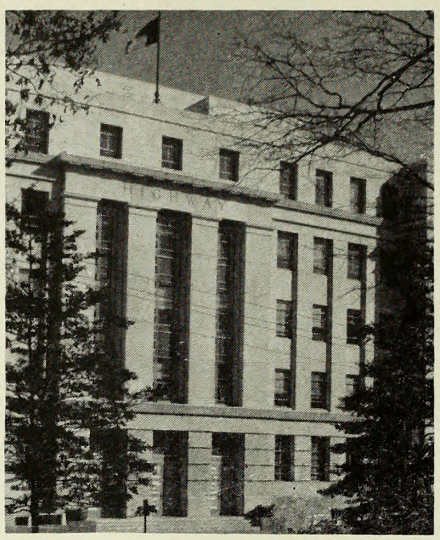
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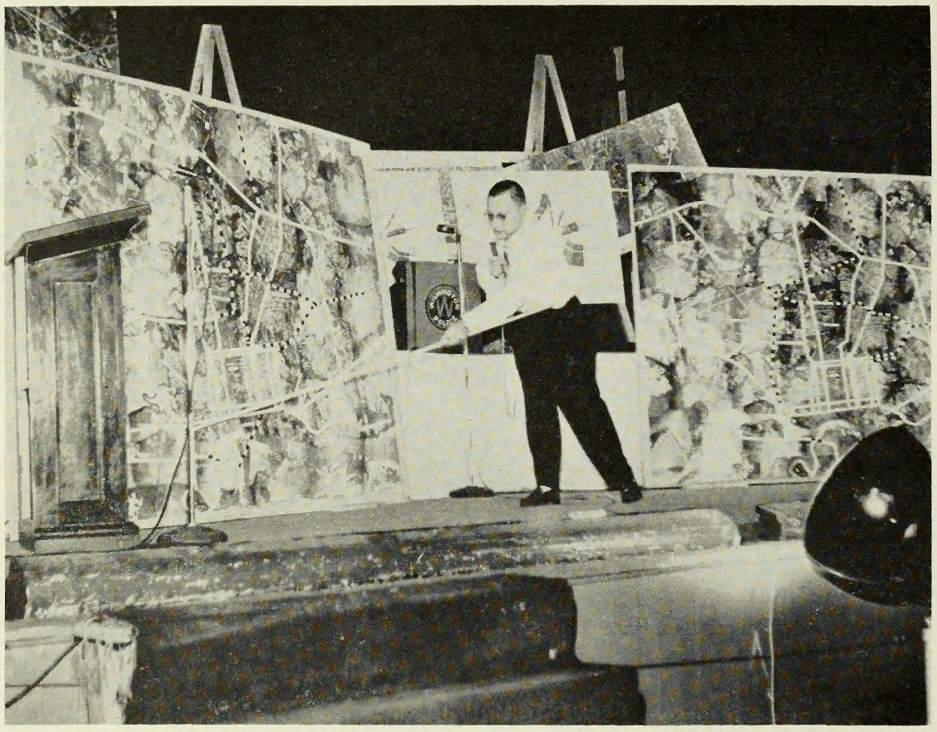
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JEANNE HAWTHORNE..... Assoc. Editor



Highway Director Babcock, pointer in hand, outlines traffic movement over one of the bridge and thoroughfare plan proposals submitted for consideration at the Wilmington public hearing. Photo courtesy THE WILMINGTON STAR-NEWS.

The Cover

For the first time in North Carolina history, a highway public hearing was given full live television coverage. The date of the hearing happened to fall on a travel day for the World Series teams, and so WECT-TV cleared all of its network schedule for six hours to bring the hearing live to its viewers. Our front cover shows one of two cameras peering down from a side balcony onto the Thalian Hall stage in Wilmington.

Wilmington Bridge Hearing Is Held

Last month's public hearing in Wilmington on alternate bridge proposals for a new span across the Cape Fear met with widespread public approval.

Though there were a great many different viewpoints, the WILMINGTON STAR expressed the general feeling that Mr. Broughton and Mr. Babcock's explanations were extremely well-done and everyone had an adequate opportunity to voice an opinion.

Three proposals were presented. First of these was to construct a new four-lane bridge close by the existing structure and a northern and eastern beltline around the perimeter of Wilmington to connect with Shipyard Road on the south. Estimated cost was set at $10,000,000.

Second proposal encompassed a high (135 foot clearance) bridge on the south side of Wilmington, tying in with Wooster and Gloucester Streets. Estimated cost is $19,500,000.

An intriguing third proposal which is apparently gaining strength in Wilmington is for a 65-foot clearance bridge on the south side, a low level draw bridge near the present structure and the perimeter belt loop.

Highway Commissioners are now studying the transcript of the hearing results before making any decision.

Highway Commission Appeals For More Funds

New sources of revenue must be found for highways if North Carolina is to meet the public demand for new and better roads in the next decade and a half.

That was the substance of the case which the Highway Commission placed before the Governor's Advisory Budget Commission in early September. Through an hour and a half session, the budget makers seemed keenly interested and concerned with the case for better roads, but went away from the session without even a whisper of commitment as to how, when or even if such revenues might be found. Their report comes later and naturally must reflect budget requests from every agency of State government.

Chairman Broughton and Director Babcock led the graphic presentation with frequent reference to the recently published 15-year report on North Carolina's highways needs. Mr. Broughton told budgeters the roads' body needs an additional $505,000,000 between now and 1975, if a desirable level of road maintenance and new construction is to be provided for the public.

How these extra funds might be secured proved to be the most interesting part of the discussion. Essentially, the Highway Commission's recommendations were two-fold. First—elimination of so called diversion of highway fund revenues to non-highway purposes. Second—increases in license fees for passenger vehicles and a ¼¢ per gallon increase in gasoline taxes.

Presently, the Prison and Motor Vehicles Departments, as well as the Paroles, Probation and Utilities Commissions, derive all or part of their support from the Highway Fund. Support of these agencies, including payment for prison labor on roads, amounted to $22,500,000 during fiscal 1959-60.

PHASE I

The Highway Commission proposed that support of the Motor Vehicles Department remain a responsibility of the Highway Fund, but that payment for prison labor on roads be restricted to not more than $5,000,000 per year. The Commission recommended support of other agencies (Prison Administration, Paroles, Probation and Utilities) should come from the General Fund.

If Prison Administration costs were borne by the General, rather than the Highway Fund, it is estimated an extra $102,000,000 would be available for highway uses during the next 15 years.

An additional $56,000,000 would be available if portions of the prison labor cost were transferred to the General Fund, while $17,000,000 would be reserved for highway purposes if the Paroles, Probation and Utilities Commission derived their support from funds other than the Highway Fund.

Elimination of these so called diversions would increase the amount available for highway purposes by some $175,000,000 over the next decade and a half; this was phase one of the proposal.

PHASE II

The Commission further proposed increases in passenger car license fees from the present $10, $12 and $15, to $14, $17 and $20. Here, it was pointed out that North Carolina is well below the national average for such taxes (national average, $18). Revenues from these proposed increases would provide an additional $96,000,000 over the next 15-year period.

Presently, the ¼¢ per gallon gasoline tax for inspection purposes goes directly to the General Fund, and while the inspection program costs only slightly more than $300,000, the revenue from the ¼¢ tax brings in almost $4,000,000 each year. The Commission's proposal was to pay the inspection tax to the Highway Fund and support the inspection program from the Highway Fund.

The Commission also proposed an additional ¼¢ per gallon gasoline tax which would bring total State gasoline taxes to 7½¢ per gallon.

Directing the inspection tax to the Highway Fund, and adding another ¼¢ per gallon gasoline tax would bring in an additional $125,000,000 during the period 1960-1975

RESULTS

The various changes, if approved, would increase Highway Fund revenues for highway purposes by a total of $396,000,000 during the next 15-year period, but such increases would still fall $109,500,000 short of the 1/2 billion dollar estimated need as set forth in the 15-year plan.

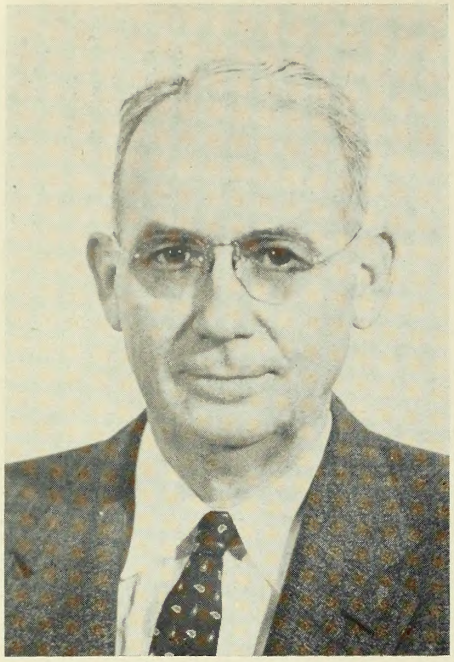
However, Highway officials estimate the $109,500,000 deficit might be taken up by continuing the 1¢ Secondary Road Bond tax for a short time after the debt is retired in 1968 or 1969.

Since the presentation before the Advisory Budget Commission was made public, numerous editorials and a good deal of public comment indicate a broad acceptance of the fact that the Highway Fund must be augmented in some manner if the demand for better roads, which is evident in all areas of North Carolina, is to be met.

At the Budget Commission hearing, Chairman Broughton stressed the point that the Highway Commission has held more than 35 public hearings in all areas of the State, and that at each of these public hearings, requests for highway and street improvements have convinced the Highway Commission that "the people of North Carolina want better roads and are apparently willing to shoulder the necessary burden to provide them."

Of the 81.5 million drivers in the U. S., 38.2 per cent are women. A survey of car use by women drivers shows that nearly half use their cars on a daily basis.

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Raleigh



T. B. Gunter Dies

Highway employees were saddened recently by the death of Chief Bridge Engineer T. B. Gunter, Jr., of Raleigh.

Mr. Gunter, 58, had worked with the Highway Department continuously since 1923. He died in Rex Hospital following a heart attack. Funeral services were held at the First Baptist Church in Raleigh and burial followed in a Sanford cemetery.

He worked in District I as an engineer inspector and resident engineer on bridge and roadway projects from April 1926 to March 1929, when he wha transferred back to the Raleigh office as a bridge designer. He was promoted to chief draftsman on May 1, 1929 and then to assistant bridge engineer on August 1, 1939.

Mr Gunter served as acting bridge engineer from Nov. 1, 1943 until he was appointed chief bridge engineer on May 1, 1944. He was elevated to Assistant Chief Engineer for Bridges in 1957.

Mr. Gunter began his highway career as a draftsman in the Bridge Department shortly after receiving a civil engineering degree from the University of North Carolina. After working two years as a draftsman, he was promoted to bridge designer in 1925.

He was a member of the Raleigh Engineers Club, North Carolina Society of Engineers, Bridge Committee of the American Association of State Highway Officials, Bridge Committee of the Southeastern Association of State Highway Officials and the Bridge Design Committee of the Highway Research Board.

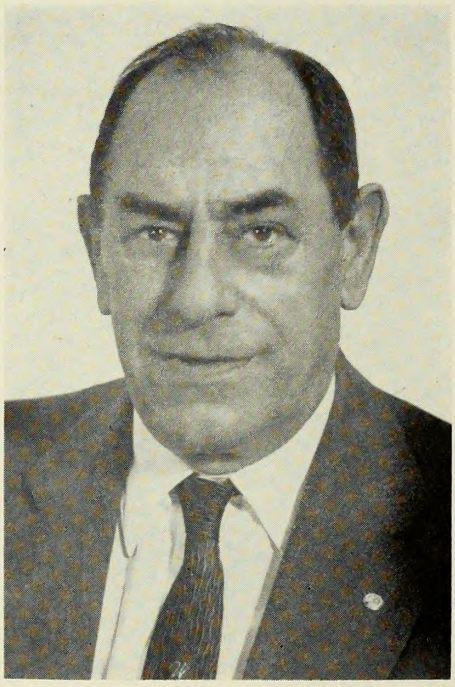
A native of Sanford, Mr. Gunter married Miss Stella Barnett of Catawba, Va., on October 12, 1927, who survives, along with his father, T. B. Gunter, Sr., of Sanford, and two sisters, Mrs. C. H. Gray of Raleigh and Mrs. H. C. Hickman of Sanford.

Winslow, Norris Promoted

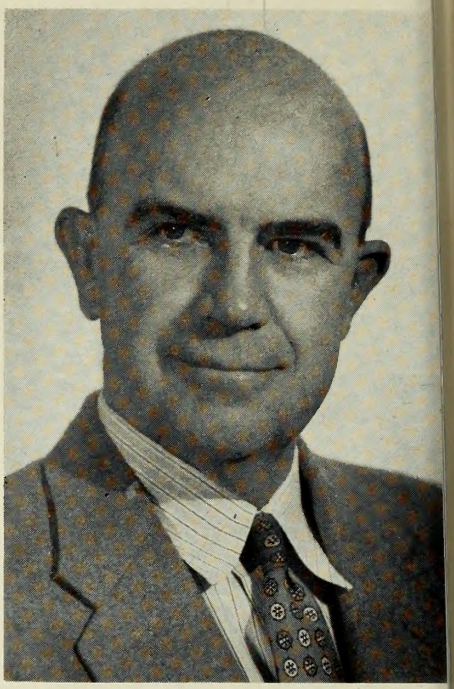
W. S. Winslow has been named Assistant Chief Engineer of bridges for the North Carolina State Highway Commission. Announcement of the appointment was made by Chief Engineer C. W. Lee. Winslow, 62, replaces the late T. B. Gunter, Jr.

James L. Norris will move up to the Hydrographic Engineer post from assistant, replacing Winslow, according to Lee. Both appointments are effective immediately.

Winslow, a native of Waldoboro, Maine has been with the N. C. Highway Commission since 1923, having previously served both the Maine and Delaware Highway Departments. He came with the North Carolina department as chief of a bridge survey party and advanced to Assistant Engineer in charge of bridge locations in 1924, becoming Hydrographic Engineer in 1925.



W. S. Winslow



James L. Norris

An honor graduate from the University of Maine, Winslow is a veteran of World War I, a member of the Highway Research Board, Raleigh Engineers Club and Oau Beta Pi, honorary engineering fraternity.

Winslow is married to the former Edith S. Roberts of Baltimore, Maryland, and they have three children. The Winslows live at 2121 Cowper Drive in Raleigh and are Episcopalians.

Norris, 50, the new Hyrographic Engineer, is a native of Dunn, a University of North Carolina engineering graduate and has been with the Highway Commission since 1929. He saw service as a Lieutenant and Captain in World War II in the European Theatre and has worked in the Bridge Department for the past 25 years, advancing to Assistant Hydrographic Engineer in 1952.

Norris is married to the former Jessie Ruth Baucom of Raleigh and the couple live at 1322 Dixie Trail. He is a member of the Raleigh Engineers Club, the N. C. Society of Engineers and is a member of the First Baptist Church in Raleigh and the Raileigh Optimist Club.

First Priority Projects Approved

Primary and urban projects totalling $35,000,000 were approved by the Commission at its October meeting in Asheville.

The 27 projects, which were listed as first priority in the recently-published 15-year highway needs study, will be built with the use of Federal Aid matched with State funds on a 50-50 basis.

Director Babcock pointed out that the new regulations of the Federal government as well as both State and Federal laws on acquisition of rights of way, now require a period of some 3 years for necessary preliminary engineering, location and design before right of way can be acquired and projects let to contract. The approval gives the green light to the Advance Planning and Location Departments to begin their preliminary studies of the projects. One of the first steps is aerial photography, which must be done during the winter when there is no foliage on the trees.

Among the projects approved was four-laning and intersection revisions in the US 301 Rocky Mount Bypass where accident experience has been high in recent months.

Projects approved for urban areas will be subject to right of way agreements with the various cities and towns whereby local municipalities bear a portion of the necessary right of way costs.

A list of the approved projects follows:

US 70—Bypass of New Bern, from a junction with NC 55 crossing the Trent River to a junction with US 70 near Grantham (Southern Bypass).

US 17 & 64—Widening to a four-lane divided facility on the Williamston Bypass.

US 17—Widening to a four-lane facility from Chocowinity through or bypassing Washington including a new bridge.

US 1—Construction of a new facility from the south end of the Moncure bypass to the north end of the US 1 Sanford bypass.

US 220—Northern extension of the Asheboro bypass from NC 49-A north to US 311 and US 220.

US 421—Construction of a four-lane divided facility northerly from the Inland Waterway Bridge at Carolina Beach to the widened sections in Wilmington.

Wilmington—Extension of 16th and 17th Streets, southerly to Shipyard Road.

US 17-A—Right of way acquisition for improvements to Ehringhaus Street in Elizabeth City.

US 19-23—Improvement of approximately 1/2 mile in Canton.

Newton—Construction of a railroad underpass for 20th Street.

Mt. Airy—Extension of Renfro Street.

NC 14 & NC 700—Construction of a bypass around Leaksville and Spray to an intersection with NC 87.

NC 16—Construction of a new facility in Wilkes County from Wilkesboro southerly to a junction with the improved NC 16 in Alexander County.

US 21—Widening and improvement for three miles from Sparta, northward.

US 64—Relocation from Quebec to Toxoway.

NC 98—Relocation from Durham to Oak Grove.

US 70A—Widening and improvement of Church Street in Burlington, easterly for a distance of two miles.

US 52—Completion of the north section of the North-South Expressway in Winston-Salem, northerly to the north city limits, to a junction with the US 52 project now under construction.

US 321—Widening or relocation on the Lenoir Bypass and northward for approximately 6 miles.

US 311—Relocation or widening to a four-lane divided facility on US 311 northerly from NC 66 to Winston-Salem.

US 29—Widening to a four-lane divided facility or relocation of US 29 from the Rockingham County line to Ruffin.

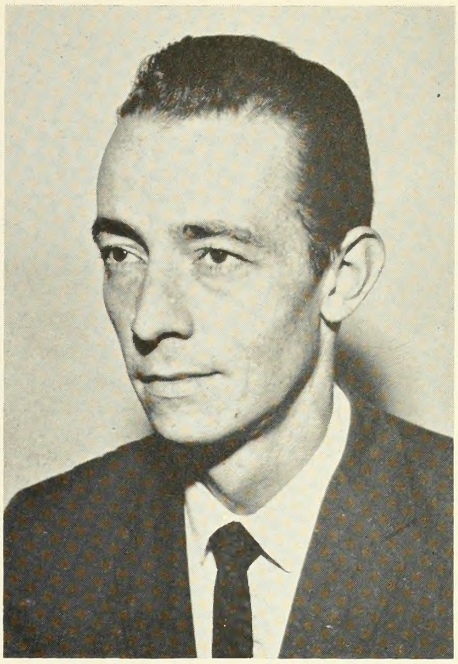
NC 27—Reconstruction from Mt. Holly into the city of Charlotte including the first stage construction of the North-West Expressway in Charlotte.

NC 191—Spur connector from the junction of I-26 and I-40, southwest of Asheville, northerly to the Smoky Mountain Bridge, thence northerly to a junction with US 23 at New Bridge, north of Asheville.

US 25—Construction of a bypass southeast and east of Hendersonville from Zirconia northerly to a junction with I-26.

US 70A—Construction of the first stage of the Durham Expressway in Durham, from the vicinity of Chapel Hill Street, to the vicinity of Alston Avenue.

US 64—Widening to four lanes from the Burke County line near Hildebran, westerly to the spur connector for I-40.



Harrison Lewis

Lewis Succeeds Wooten As Asst. Atty. General

Harrison Lewis has been appointed Assistant Attorney General for the Highway Department, succeeding Kenneth Wooten who resigned to enter private law practice in Raleigh. The announcement was made by Attorney General Wade Bruton.

Lewis, a native of Cashiers, joined the Highway Department's legal staff in 1955. Prior to that time, he was engaged in private practice for a short while.

The new Assistant Attorney General received his education at the University of North Carolina, where he received the AB degree in psychology in 1951 and the LLB degree in 1954. He was admitted to the bar in 1954.

He is the son of W. F. and Marjorie H. Lewis of Cashiers. Married to the former Janice Dute of Milford, Conn., he is the father of four children: Karen Brittain, age 5; Suzanne Elizabeth,3; Diana Sharon, 1½ and an infant son. They make their home at 4404 Yadkin Drive, Raleigh.

The automobile is the leading passenger transporter in the U. S., handling 89 per cent of all intercity travel.

PERSONNEL PERSPECTIVES and POINTERS

The State law does not provide payment for overtime work but it makes certain provisions for granting equivalent time off when an employee is required to work hours beyond his normal work week.

On July 1, the Highway Commission's Compensatory Leave Policy went into effect throughout the Highway Commission, and is intended to guarantee that Compensatory Leave will be granted and that it will be administered in a uniform manner throughout the State.

In order to acquaint employees with the provisions of this policy, we are reproducing the Compensatory Leave Policy below. If you have any questions concerning this policy, please contact your supervisor or the Highway Personnel Office.

Emergency or Non-Scheduled Work Days: When an employee, who is eligible for compensatory leave, is required by his Department Head or Supervisor to work on a non-scheduled work day such as Saturday, Sunday or holidays; or is required to work in cases of emergency, such as snow removal, floods, hurricanes, etc., the employee shall be given equivalent time off.

Seasonal: In cases where sufficient personnel is not available to stagger the working hours of employees in order to avoid overtime, and an employee is required to work hours over and beyond the normal work day due to seasonal operations such as in Road Oid or Construction, the employee shall be given equivalent time off.

Office Employees: If a Department Head or Supervisor deems it necessary to extend the hours of a normal work day for office personnel, due to heavy work load or in order to meet a specific deadline, the employee shall be given equivalent time off for the hours worked in excess of the normal hours per day.

Granting of Compensatory Time: The determination as to when the employee will take compensatory time is a decision to be made by administrative or supervisory personnel. This responsibility will be carried out in such a manner as will provide for compensatory time off as soon as possible after it is earned. Time off may include periods of forced inactivity because of weather or other seasonal operations. This may be in winter months when weather conditions force a curtailment of activities, and also applies to periods in the summer when weather or other forces affect the employee's routine work. This does not mean that all compensatory time will be granted during periods of bad weather. It is the responsibility of the supervisor to arrange time-off in the best interest of effective operations and at the same time provide for compensatory time in a fair and equitable manner as possible.

MAINTENANCE OF RECORDS

It is required that an accurate and up-to-date record of the amount of scheduled overtime work performed and compensatory leave taken be maintained for each employee eligible for compensatory leave. It will be the responsibility of the employee's immediate supervisor (the person to whom the employee reports for daily instructions) to maintain this record in a standard record book designed specifically for the purpose of recording compensatory leave earned and taken. This record book will include a general statement of the compensatory leave policy and detailed instructions on the use of the record book. The record book kept by the supervisors will be turned in to the Division Engineer or Department Head for review and record summary at the end of each quarter. The record book itself is considered as an official record and may be filed in the Division or Department Office or in some other locations such as District Offices, or offices of other supervisory personnel. It will be the responsibility of the Division Engineer or Department Head to submit a quarterly report on a prescribed form showing a summary of the compensatory time earned and compensatory time granted within his particular operation. These reports will be forwarded to the Highway Personnel Office which will be responsible for consolidating the quarterly reports on a 12-months basis and will prepare and maintain as a permanent record, information contained in the reports.

NON-CUMULATIVE

Compensatory leave is not cumulative beyond a twelve months period. For this reason the employee must be required to take any compensatory leave which may be granted him as soon as possible at the date it was credited.

COMPENSATORY LEAVE NOT APPLICABLE IN TERMINAL LEAVE PAYMENTS

Lump-sum payment upon separation from State service for any reason is not applicable to accrued or unused compensatory leave.

NON-TRANSFERRABLE

Compensatory leave credits are not transferrable to another State Agency.

LENGTH OF WORK WEEK

As a basis for determining overtime work, the work week will be expressed in number of hours per day and number

The work week will be established as follows:

General Maintenance Personnel	9 hours per day, 5 days per week.
Landscape	9 hours per day, 5 days per week.
Road Oil	9 hours per day, 5 days per week.
Traffic Services	9 hours per day, 5 days per week.
Construction	9 hours per day, 5 days per week.
Location	9 hours per day, 5 days per week.
Equipment Department	9 hours per day, 5 days per week.
Bridge Maintenance	9 hours per day, 5 days per week.
Raleigh Office Personnel	8 hours per day, 5 days per week.
Division and District Office Personnel	8 hours per day, 5 days per week.
Bridge Tenders	60 hours per week.

of days per week. Overtime work will be considered as time worked in excess of the standard work day.

CLASSIFICATIONS SUBJECT TO COMPENSATORY LEAVE

It is recognized that the responsibility involved in certain supervisory and administrative functions cannot be carried out on the basis of a routine or standard work day. Employees in a supervisory or administrative capacity are responsible for definite duties and responsibilities that must be performed and to a large extent they must exercise independent judgment concerning their working hours. Therefore, certain supervisory and administrative positions are exempt from the provisions of compensatory time.

Personnel Dept. Plans Visits

For more than a year the Highway Commission has been training several employees in the Personnel Department in all phases of employee relations. This training was done so that employees in the field could call on the representatives from the Personnel Office and ask for assistance in solving problems in the many areas of employee relations.

Very recently a memorandum was sent to the Division Engineers indicating that these employees would soon be making routine trips to each maintenance yard. They will talk with supervisors and employees on any problem in the personnel area.

These trips do not mean an employee has to wait for the visiting representative. The intention during these trips is to talk over and resolve problems which may not need immediate attention. Any employee may continue to feel free to write to the Highway Personnel Office at any time for aid in solving any personnel problem. If your problem needs immediate attention write the Personnel Office and you will receive assistance as early as possible. If your problem does not need immediate attention, keep it in mind until you receive notice that a representative from personnel is visiting on a regular trip.

Interstate Progress Praised By Tallamy

Speaking in Greensboro last month, Federal Highway Administrator Bertram Tallamy paid high tribute to North Carolina for its progress in Interstate Highway construction. Tallamy said North Carolina, and our sister state to the South, had already opened to traffic significant portions of the Interstate Highways to final standards.

Tallamy's address was before the annual convention of the North Carolina Motor Club, and it marked the first time Tallamy has been in North Carolina for a speaking engagement. The Bureau of Public Roads boss said, however, that he had often visited North Carolina and had driven over many miles of our excellent roads.

Tallamy traced briefly the history of the Interstate program from the 1956 Federal Highway Act which set up the 40,000 mile system. He pointed out that an additional 1,000 miles were added to the system later to provide much needed connecting links between already approved Interstate Routes.

The BPR chief struck hard at persons who criticize the overall benefits of the Interstate program, simply because a few irregularities had been alleged. The speaker said an estimated one and one-half million people are directly or indirectly involved in the construction of Interstate Highways. "Can you imagine a city of one and one-half million people without an occasional crook here or there," said Tallamy. He assured his listeners that every irregularity was fully investigated and cleared up, and he stressed that the tremendous benefits to be derived from the Interstate construction program should not be sacrificed because of a few irregularities.

Among the many benefits Interstate highways bring the public, Tallamy listed safety to the traveling public as the most important. He said the 565 mile New York thruway had a fatality rate of only one death per one mundred million miles. He said the Interstate System, when completed, will save approximately 4,000 to 4,500 lives per year. He also tabbed the completion date as 1972 and predicted that the States, in cooperation with the Bureau, will be able to finish it by that time.

Tallamy said the urban sections of the Interstate System could easily be defended against attack if it is pointed out that large centers of population are major origins and destinations for traffic. In this regard, he said the cost per vehicle on Interstate urban expressways was only four-tenths of a cent per mile, while rural Interstate costs were seven-tenths of one cent per mile, and rural Primary Highways, one and one-half cents per mile per vehicle. "Though the initial cost of these urban Interstate extensions is quite high, the user benefit ratio shows them to be the cheapest in construction," he said.

Tallamy tossed aside his prepared speech and remarked that he would like to talk off-the-cuff to the small but very interested AAA Board of Directors.

The AAA Board gave Tallamy a standing ovation at the beginning of his talk and again at its conclusion.

Eastern Route Picked For I-77

The Highway Commission voted recently to route Interstate 77 just west of Mount Airy, through the area known as Fancy Gap.

In approving the eastern route for this portion of I-77, the Commission selected the route which will serve the most people. According to Highway Director W. F. Babcock, "the east line will provide a lot of local service while the western line will not." He said from the standpoint of service, the eastern line has the advantage.

The alternate, or western route, would have run due north from Elkin, through Low Gap.

Interstate 77 eventually will run from the vicinity of Cleveland, Ohio, to Charlotte. The route will connect Elkin with the West Virginia Turnpike and travel northward to Cleveland. When completed, the route will cut travel time between Charlotte and Cleveland, by approximately one-third.

The Commission action on the route followed a public hearing held in Mount Airy recently, with regard to the location of this section of I-77.

The proposed eastern route now will be forwarded to the U. S. Bureau of Public Roads for its approval, and to the Virginia Highway Department for consideration when it determines the location of the route through Virginia.

The Highway Commission also adopted a resolution by Commissioner Ralph Howland of Elkin, asking the administration of the Highway Department to study the feasibility of an East-West highway connecting northwestern North Carolina to the I-77 location.

Challenge Of The Sixties

Director Points Up Graphic H'wy Needs Throughout State

Speaking before the Fifteenth Annual Convention of the North Carolina State Highway Employees Association, Highway Director W. F. Babcock declared the Decade of the Sixties will be one of the most challenging ever faced by the Highway Commission. "The people of North Carolina look to us for leadership, and I am confident we have in our Highway Department, the ability, the training and the ingenuity, as well as that all-important spark of personal drive to accomplish the task assigned us," said Babcock.

The Director added, "The highway problem of the Sixties will be brought about by an emerging change in character of the concept of living in North Carolina, by the serious problem of available revenues for highway purposes and by the possibility of increasing federal regulations upon the activity of our employees, especially, those involved directly in the design and construction of highways." "These," he said, "are natural problems, but nevertheless they must be met."

Keeping North Carolina's highway system abreast of the State's economic growth will cost an extra $34,000,000 per year over the next 15 years. "We have a good, two-lane highway system, but in ten years, it won't be good enough," said the Director.

Industrialization and other economic expansions are already causing serious traffic overloads, which will require transforming at least 25 per cent of our present two-lane Primary Highways into divided four-lane thoroughfares over the next decade. "This," said Babcock, "will be in addition to the Interstate Highway network, almost one-third of which is now completed in North Carolina and open to traffic."

A large portion of the Director's talk dealt with the history of the Interstate program and the progress North Carolina has made since the 1956 Federal Highway Act was passed by the Federal Congress.

"Basically, what is the Interstate System? It is a system of highways worked up cooperatively by the State Highway Departments and the U. S. Bureau of Public Roads. Initially, this work was done in 1947 with a series of specifically designated routes covering some 40,000 miles of highways in the United States.

It was developed because of the need after World War II for a Defense Highway System. Actually nothing very much was done about this system until 1954, at which time the Congress increased the appropriation via Federal Aid and made some very minor appropriations of 60 per cent Federal and 40 per cent State funds to begin the construction of the Interstate System.

Still, very little was accomplished until the period 1954 to 1956, during which time the whole highway transportation problem of the Nation was becoming very, very critical, and there was a recognized need that the problem must be met.

In 1956, the Federal Congress, after debating the concept of bond issues and various other means of financing such a system, determined that this 40,000 mile network of roads (now increased to 41,000) would be built over a period of 15 years, with 90 per cent Federal funds and 10 per cent State funds.

"Where did the money for the new Interstate System come from? Recently, the Federal gasoline tax has been raised from two cents to four cents, and generally Federal gasoline taxes, along with certain excise taxes, are used to finance this gigantic system.

"Over the years, Congress has been allocating a certain amount of 50-50 Federal Aid to the States for their regular Primary, Secondary and Urban Roads.

"Why are restrictions clamped down tighter over these Federal Aid roads? Congress realized that, with the Interstate System, they were not talking about a small venture. They were actually launching the greatest public works program in the history of mankind. It is a program that will approach a magnitude of 40 to 50 billion dollars over the next 15 years. That is an average of $250 for every individual who will be living in this country during this 15-year period or, in terms of your family and mine, an average of $1,000 per family.

"Congressional committees are, of course, interested as they should be, in making certain that this system will be built efficiently, that it will not be gold plated, that it will be constructed honestly and that the best possible use will be made of taxpayer money.

"All that anyone is interested in or can expect from any of us in Federal Aid highway work is that each of us does our work as efficiently as possible, inspects his work carefully and makes the best possible judgment decisions that he can make.

"Turning to another subject, recently you have read that our Highway Commission has published a 15-year long-range plan for highway improvements in North Carolina. This plan has been widely discussed in our newspapers, and we have received many favorable editorials, as well as a few criticisms. Criticisms are only natural, since it was not possible to include every needed project.

"Criticism and arguments are healthy and desirable, because it is important for the public to realize that we have only a limited amount of funds and that we cannot build all of the highways which everyone would like. One of the purposes of this report was to try to show to our people just what we can do with the amount of funds that we will have available, and to illustrate to the public that it is their decision as to what level of highway service they wish, based upon the amount of funds they are willing to provide the Commission under the various methods of taxation.

"The Commission indicated recently to the Advisory Budget Commission they felt it was absolutely essential that the Commission have an additional $34,000,000 per year over the next 15-year period (Advisory Budget Commission requests story on Page 1).

"Why do we need more money to provide a bare minimum level of services? There are many reasons for this, and I should like to illustrate a very basic reason. I would have to ask you to accept with me this first assumpton; that

as the number of cars on the roads double, the amount of highways needs double, either in terms of more highways, or more four-lane divided highways or more grade separations.

"The amount of money we receive to support the Highway Department comes from the gasoline tax, motor vehicle registration fees and licensing fees; our funds increase each year in direct proportion to the number of vehicles on the road and the distances they drive annually.

"In most cases, actually, there are just more vehicles on the road with the average amount of driving remaining about the same.

"The Highway Department can operate efficiently and provide more highways as more people drive if the funds with which we work are in proportion to the increased number of vehicles and the increased amount of driving.

"Obviously, this, however, is only true under one condition, that condition being that the cost of highway construction remains the same.

"What has happened in the last ten or fifteen years? Has the cost of living been the same, and has the cost of doing things been the same? The obvious answer is no.

"Our average salary in the last ten years has increased almost 60 per cent; that is as it should be, and we have by no means reached a point where our salary scales are ideal, though we are delighted with recent new pay scales and increment schedules which have meant increases to our people.

"Along with salary increases, have gone increases in the cost of construction, as well as increased costs of maintenance and rights-of-way.

"Thus, we have been faced with what might be considered a constant revenue on the one hand, and rising costs of doing our job on the other."

Babcock told employees that a good example of highway needs is reflected in the Secondary Road System of North Carolina, where some 40 per cent of the 57,000 mile network has been hardsurfaced. He pointed out that the hue and cry of the average citizen is for more paving of Secondary Roads, based on the common misconception that paving reduces maintenance cost.

"You and I know different," said Babcock, "because it costs us a little less than $400 a mile per year to maintain an unpaved road, and something over $800 per mile each year to maintain a hardsurfaced Secondary Road. Thus, each year, if we pave a thousand additional miles of Secondary Roads, what happens to maintenance cost? In simple terms, it increases it half a million dollars. Those of you here today who work in maintenance realize the tremendous importance of such activities. If we don't properly maintain our paved Secondary Roads, in a very few years we will have, in effect, an unpaved road. Thus, each year, as we pave more and more Secondary Roads, our maintenance costs go up."

The Director referred to the cooperative research program now being sponsored by the Highway Commission, U. S. Bureau of Public Roads and State College. He indicated that research work shows a great increase in the use of Secondary Roads by persons or families engaged in part-time agricultural work and part-time work in nearby industries.

He said greater traffic loads would necessitate a higher level of maintenance. "Perhaps we will have to develop new methods of snow removal in the mountains, since prolonged closing of such facilities not only stops our schools, but brings industry to a halt, and thereby hurts the economy."

The Director said the same type of strain is being placed on North Carolina's Primary and Urban Highway System. He said ten years ago, the cost of a good Primary Highway might be $100,000 a mile. "Today we talk of Primary Highways costing from $400,000 to $800,000 per mile."

Babcock pointed out that 30 per cent of all city streets in North Carolina are a responsibility of the State Highway Commission. Stressing the trend toward urbanization in North Carolina, he pointed out that 40 years from now, it is expected that 70 per cent of the Nation's population will be living in urban areas.

"Obviously, you, as highway people, realize full well that urban street systems in North Carolina were not designed for the automobile, but rather for the horse and buggy era. As each city gets larger, we have more and more traffic, more streets in the suburban areas, but the same old street system in the downtown sections."

This problem can only be licked by intensive, cooperative thoroughfare planning on the part of the city and the State Highway Commission. "This kind of program has already been launched, and is meeting with a great deal of support."

Referring briefly to the growing problem of right of way acquistion, Babcock told employees that annual expenditures for right of way purposes has grown from $80,000 a year in the early 30's to $15,000,000 per year today.

"If we are to solve our problems, we have to stop this right of way cost rise. Long-range planning and acquisition of rights of way many years before construction can very well be the best answer to the problem.

"In the Sixties, we, as highway employees, will be sitting squarely in the middle of a great demand for more and more highways on the one hand, and a tight squeeze of available funds on the other. In North Carolina, the way we live dictates an automotive environment. As we decentralize, more and more cars are needed to take children to school, to do our shopping, to go to work, and we will travel further distances to our work and to our shopping.

"As we move into these 1960's, there will be a two-fold challenge. We will need more efficiency in construction and maintenance operations. On the other hand, each of us must be better informed of our highway problems, so that we can speak out forthrightly and explain to our people that highways do cost a great deal of money. We should also be able to explain to them what we can do and what we cannot do and, in some cases, why we cannot do it."

Babcock concluded, "It is a great challenge, and I know each of you will be proud to be a part of this challenge, that each of you will join us in meeting this challenge, and that we will continue to give North Carolina one of the finest highway systems in the Nation."

Turner Elected Association Head

R. L. Turner of Gatesville was elected president of the State Highway and Prison Employees Association at the recent convention in Asheville. The new president is a Division Supervisor for the Prisons Department.

Other new officers include Layton Gunter of Raleigh, first vice president, and F. K. Westwood of Asheville, second vice president. Otis Banks was reelected executive secretary.

Total Mileage Now 193

33 Miles Of Interstate Highways Opened To Traffic In Past Month

Another 33 miles of completed Interstate superhighways were opened to traffic last month in North Carolina bringing to 193 the number of miles of four-laned, controlled access highways available to traffic.

Later this year another 25 miles will be opened as North Carolina continues its position of national leadership in the progress of Interstate construction.

Longest single section under traffic today is the I-95 route serving eastern North Carolina from Kenly southward to Eastover in Cumberland County. This portion of the road which parallels US 301 is 51.7 miles in length.

Other completed and open sections of Interstate routes include portions of Interstate 85; the Charlotte Bypass (14 miles), the Salisbury Bypass (15.4 miles), Greensboro-Whitsett (13.8 miles) and the recently-opened portion from Henderson to the Virginia line (18.3 miles).

Another I-85 link between Whitsett and Efland is slated for completion and opening in November. When accepted by the Highway Commission as finished this link will add 22.2 miles to the system.

Completed portions of Interstate 40 include; Greensboro-Kernersville (15.7 miles; Statesville-Conover (16.8 miles); Hildebran to the Burke-McDowell County line (33.5 miles) and Winston-Salem to the Yadkin River (13.4 miles).

Eastern extension of the I-40 East-West Expressway in Winston - Salem is to be finished and opened to traffic later this year, adding another 3.0 miles to the Interstate System.

Several other sections of the superhighway network are already four-laned but will require some modification before meeting ultimate Interstate standards for complete access control. Included in this category are: 41-mile stretch of the I-40 route between Greensboro and the south end of the Lexington Bypass, an 8 mile Lumberton Bypass section of I-95 and the 6.9 mile Old-Fort-Ridgecrest highway, eventually a part of the I-40 road.

In many sections where Interstate roads are not already open, contracts for grading or paving are now underway.

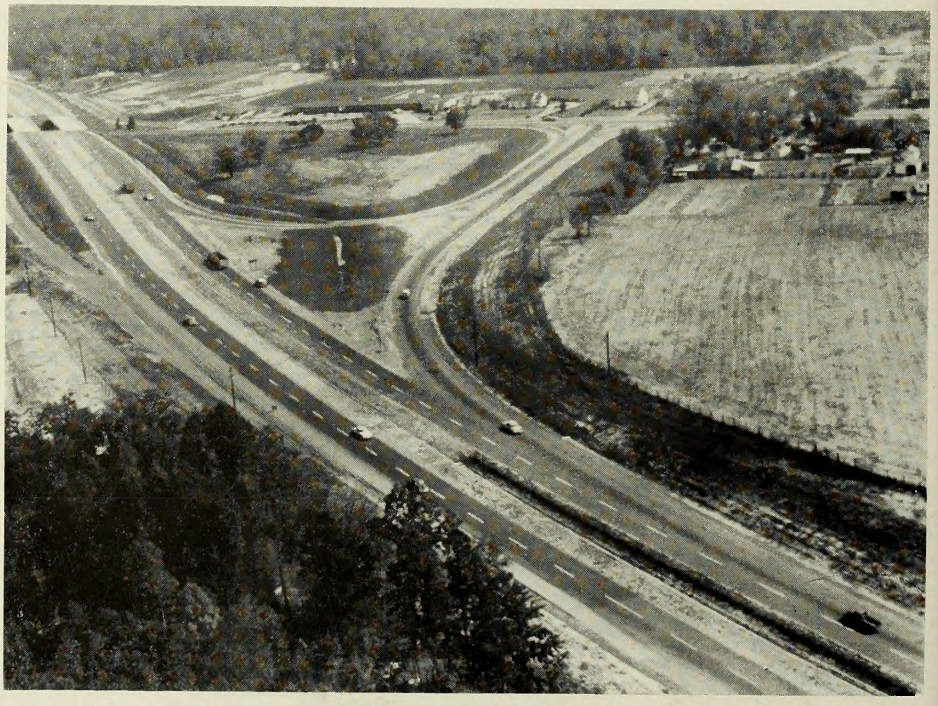
North Carolina's Interstate program calls for construction of 775 miles of high type freeways in the next fifteen years. The first section of completed Interstate, a three mile section of the East-West Expressway in Winston-Salem was opened to traffic in early 1958. The past two year construction period, making a new high record for highway work in North Carolina, has seen another 190 miles completed and opened.

Safety statistics show Interstate highways to be four times safer than conventional two-lane roads. Average deaths per one hundred million travel miles on two lane roads run slightly over eight. For the same travel mileage on Interstate highways the death toll is slightly over two.

Five Interstate roads will eventually serve North Carolina. North-South arteries include Interstate 95, 85 and 77 while Interstates 40 and 26 are east - west routes.

Access is permitted to Interstate highways only at strategically located interchanges. The access-control feature is the greatest contributing factor to greater safety. With it, no left turn movements are permitted and there is no need for stop signs or traffic lights. Thus motorists are free to move at highway speeds without the delays, interruptions or dangers of cross movement. Intersecting roads are carried over or under the Interstate on grade separations.

The same type of design has been adopted by the State Highway Commission for its intra-State Trunk Line Highway System. Four-laning with a degree of access control is planned on many major US and NC numbered routes.



This aerial photo shows the Interstate 95 interchange to US 301 at Eastover. (Photo courtesy Bill Shaw, photographer for THE FAYETTEVILLE OBSERVER)

Morris, Betts Study Ferry Operations

Commissioners Ralph Morris and Stanley Betts have been named to a committee to study ferry operations between Atlantic and Ocracoke, with an eye toward taking over the private ferry.

The Taylor brothers, owners of the Sea Level ferry, have asked the Highway Department to buy the ferry.

The two-man committee was named to look into the possibility of adding another ferry to the run, should the State take over the operations, as well as the idea of continuing the ferry on a toll basis. All other State-owned ferries operate on a toll-free basis. Commissioners Morris and Betts also will look into the possibility of adding more ferries to the Oregon Inlet and Hatteras Inlet routes.

Aerial Photos To Be Used In Right Of Way Cases

Aerial photography is being used by the Highway Department in determining the value of land before highway improvements are made.

The use of aerial photographs for this purpose was begun several months ago. The Raleigh Belt-line area was the first to be photographed and many other projects are now being photographed.

These photographs will be most helpful in settling right-of-way cases in court. In the past, undeveloped areas, such as Raleigh's Downtown Boulevard, have increased greatly in value with the completion of highway improvements. Prior to the construction of the bouelvard, this was primarily a slum area and just recently, a property owner asked $60,000 for a small portion of land where an interchange is now under construction.

Many court settlements in right of way cases have been settled on the basis of conditions which existed following the completion of a highway project, but it is hoped that these aerial photographs will be valuable in settling future right-of-way cases.

Emily B. Blount:

Traffic Engineer Is First NC Woman To Become Licensed

Emily Blount of Raleigh is making a mark for herself in a man's world.

She is Associate Traffic Engineer with the Highway Department where she has worked for more than five years.

Her most recent step up the ladder of success in the predominantly-male field of engineering came when she passed the rigid exams administered by the North Carolina State Board of Registration for Professional Engineers and Land Surveyors and became the first woman in the State who is a licensed engineer.

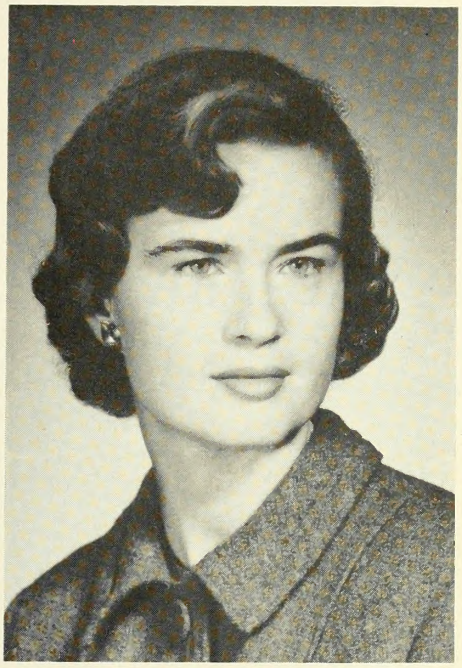
Firsts are nothing new for Emily, however. Persuing a career that seldom holds attraction for women, she was the first member of the weaker sex to receive a degree from State College's Civil Engineering School. Other girls had studied engineering at State, but none seemed to have enough stamina to complete the course and graduate.

While attending State, Emily worked summers in the Highway Department's bridge drafting room. Upon graduation, she realized that her sex would limit job possibilities in her chosen field, so she returned to State for a year of graduate study in transportation and highway design, earning a professional degree in Civil Engineering with an option in transportation.

The pretty engineer feels that her field is a fascinating one for a woman, but allows that one must have an analytical mind and be adept at math and drawing. Determination, however, is the main requirement. Emily thinks that female Civil Engineers can find a place as consulting engineers, city planners, or as highway and bridge designers for State or Federal government.

Her duties as Associate Traffic Engineer include everything from the re-design of an intersection, design of entrances to commercial establishments from highways, to her present assignment—designing a 15-foot wide overhead sign.

Emily's interest in engineering comes naturally. Her father, C. E. Brown of Wilmington, retired last year as head of the Third Highway Division after more than 37 years of highway service.



Emily B. Blount

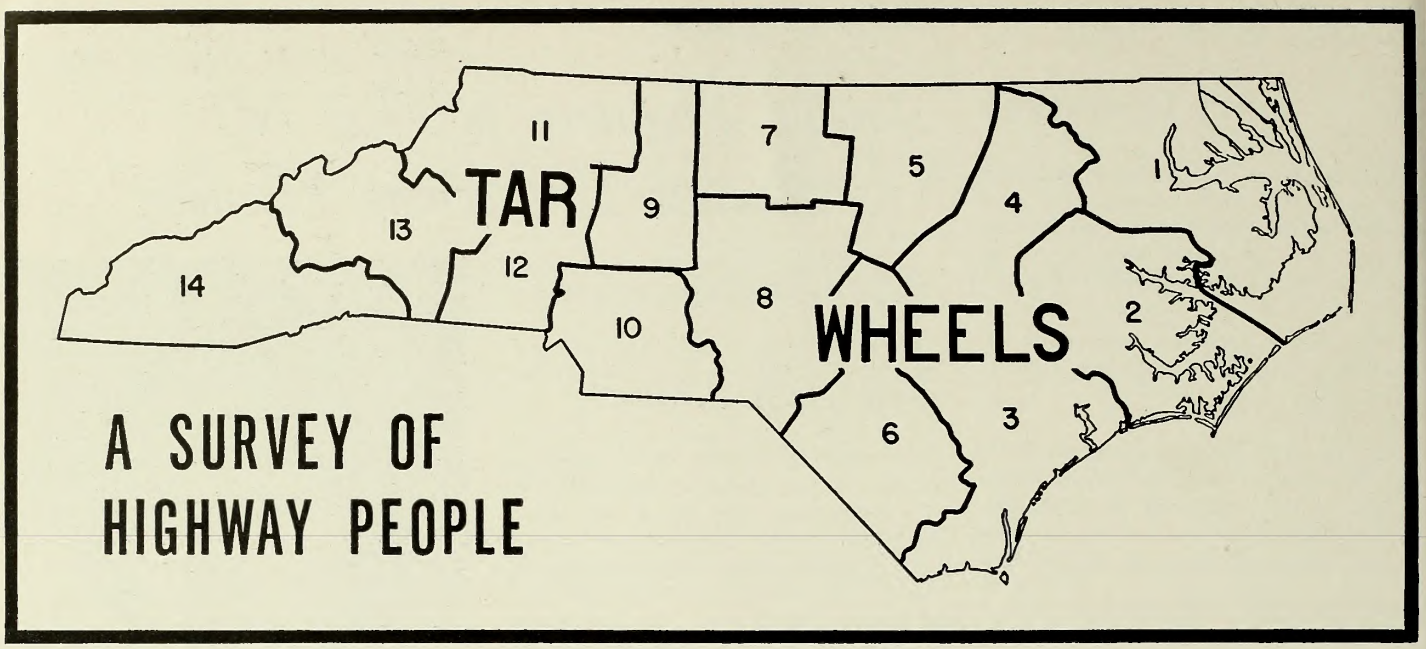
Not only is her father an engineer, but she married one too. She met Sam Blount, Jr., while both were State College students. He's a mechanical engineer with L. E. Wooten and Company of Raleigh. He too is a registered engineer.

The fact that both have the same profession enables them to attend meetings together frequently. Both are members of the N. C. Society of Engineers and the Raleigh Engineers Club. Sam is editor of Engineer magazine, published by the N. C. Society, and Emily is the associate editor.

Most of their spare time is spent getting settled into their new home in Chestnut Hills, although Emily does find some time for her favorite sport-swimming. She is a Red Cross swimming instructor. The Blounts attend St. Michael's Episcopal Church in Raleigh.

A quick-thinking employee came up with a new one when his foreman said: "Hey, bud, how come you're sleeping on the job?"

"Goodness gracious," he shot back, "can't a man close his eyes for a minute of prayer?"



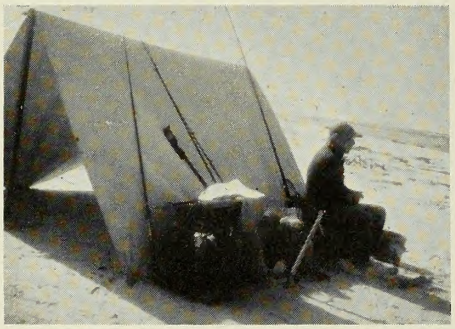
HEADQUARTERS

By JEWEL ADCOCK

BRIDGE—Congratulations to *Mr. and Mrs. K. D. Hill* upon the birth of their little son, Steven Douglas, September 6. Our very best wishes to *Robert L. Spence*, Engineering Aide II in Bridge Location, who was married October 1 in the West Raleigh Presbyterian Church to Miss Beverly Ennis of Lenoir. New faces in the Drafting Room are: *Charles Rudolph Crettier, William Kenneth Creech, William Bruce Dean, Lawrence Hunter Roane, Jr.*, and *Nathan C. Spivey*. New trainees are: *John W. Watkins, Forest Adkins, Terry Blankinship, Shanks Bradsher* and *Felton Lowman*. Recent resignations include: *R. E. Payne* and *W. J. Rogers*, who returned to college and *C. S. Hicks* who joined the Army. Temporary employees *J. M. Dawkins, J. L. Neal* and *R. J. Massengill, Jr.* recently left the Department to resume their college training.

CONSTRUCTION—We are sorry to lose *Mrs. Rachel Hogan*, a recent transfer from Legal, who resigned Sept. 16 due to the illness of her son. Mrs. *Viola Paul* replaces Rachel. Fellow employees are glad to have *John Davis* back at work following a recent heart attack. *David Barber* enjoyed a week's vacation the last of September at home. Co-workers of *Mary Murphy* surprised her on her birthday, Sept. 9, by entertaining her on break.

ROADWAY—*Orval Riffe*, delegate from Roadway Design, attended the Highway Employees Association Convention in Asheville October 27-29. *George Sakas* took his family to Carolina Beach, Labor Day weekend. *Mr. and Mrs. James D. Duncan* and son spent a week at Carolina Beach in August. Welcome to the following new employees in Roadway Drafting: *David F. Arthurs, Leonida Fantini, Bob N. Hinson, Robert M. Kirkpatrick, Thomas B. Walkup, Olin J. Meeks*, and *James M. Dawkins*. Good luck to *Gwendoline Jones* who resigned Sept. 9, and to *Edwin A. Westmoreland*, who resigned Sept. 9 to continue his studies at N. C. State College.



Charles S. Biggs of Bridge Maintenance, on a recent camping trip to the Outer Banks, tries to decide whether shrimp or cut bait would be better for surf fishing. Accompanying him on the trip were Cecil Stearns, Julian Ray and Worth Sorrell. They really roughed it and all slept in sleeping bags.

PLANNING—*Roger P. Edwards* from Charlotte is the new Research Assistant in Mr. Jay's office. On October 3, *L. V. Jay* celebrated his birthday along with President Eisenhower and other such notables. (He's only half Ike's age though!) A delicious birthday cake, baked by *Doris Hall*, was thoroughly enjoyed by all. MAPPING SECTION—It's nice to have *Nellie Tutor*, who recently transferred from Roadway. Congratulations to *Allen McDuffie* and Marcia Kaye Seagroves who became Mr. and Mrs. recently. Welcome to *Connie Mac Wester* of Lillington and *Ben W. Johnson* of Liberty, new draftsman in Mapping.

LOCATION—Former co-workers miss *Nell Murphy* who recently transferred to the Winston-Salem Right of Way Office while her husband, Jim, resumes his ministerial studies at Wake Forest College. It's nice to have *Jo-Ann Turner* as Mr. Cook's new secretary. Jo-Ann's husband, Wilbur, attends N. C. State College. They have a little son, Alan, 12 months old. *A. C. Dodson* recently attended a three-day meeting in Washington, D. C. of the National Steering Committee on Geology as applied to highway engineering. Congratulations to *Louise High's* son, Roy Shelton, who was married September 3 in the Tabernacle Baptist Church to Miss Judy Crosby. Roy is a Junior in Dental School at UNC and Judy is employed as a secretary at Memorial Hospital in Chapel Hill.

MAINTENANCE—State Maintenance Engineer *L. H. Gunter* has moved his family to Raleigh into a lovely new home at 500 Transylvania Avenue in Country Club Hills.

LANDSCAPE—A Departmental meeting of Area Landscape Engineers and Division Landscape Supervisors was held August 2-3 in the Raleigh office. *James Saunders* and *Worth Sorrell* attended the Fifth Annual Right of Way Conference at Mountain Lake, Virginia in August.

Mr. Saunders was on the program to explain highway policies regarding herbicide work along utility right of way in North Carolina. R. L. Nicar, Landscape Engineer, accompanied by E. A. Hicks, Jr., Associate Landscape Engineer, both of the Virginia Department of Highways, spent Sept. 14-16 making a study of erosion control operations and Interstate Highway rest areas of the North Carolina State Highway Commission. Directing the tour were *F. H. Brant*, Landscape Engineer, and *F. H. Bowen*, Landscape Designer.

EQUIPMENT—Congratulations to the *John Lambeths* upon the birth of a baby boy, Aug. 11, in Rex Hospital. Fellow workers are glad to have *Nancy Dew Fowler* back at work after several months' leave of absence. The following temporary employees resigned recently: *Mrs. Ruby Lee Johnson*, *Norma Jean Honeycutt* and *Judith Buchanan*.

PURCHASING—*B. P. Lambert* and his family spent 10 days vacationing in Daytona Beach, Florida recently. *Vance McDaniel* enjoyed a week's vacation at home. *J. R. Ray* reports a grand time on a recent weekend fishing trip to the coast. *Janis Lee* chose home for a week's vacation in September. Fellow employees in the Department gave *Christine Champion* a lovely surprise baby shower Oct. 5. Many beautiful gifts were received, and refreshments were served to all. Christine, secretary to *R. G. Johnson* and an employee of 13 years, went on maternity leave Oct. 7.

BITUMINOUS—*Pauline Pleasants* spent a week vacationing at home the second week in October.

ACCOUNTING—*Mr and Mrs. Donald Hicks* announce the birth of a daughter, Denise Micheal, October 4 at Mary Elizabeth Hospital. Congratulations and best wishes to *Ruth Powell* who, on September 3, became Mrs. Joe Earl Brogden at Woodland Baptist Church in Wake Forest. *Mr. and Mrs. Rex Woodlief* are the proud parents of a new son, Levy Martin, born in August at Rex Hospital.

PHOTOGRAMMETRY—*Bob Wood*, draftsman, is on military leave in South Carolina with the 430th Transportation Detachment (Aircraft Maintenance). After three months of active duty at Fort Jackson, Bob will probably transfer to another post for an additional three months of specialized training. Employees who recently resigned to return to college are: *Carter Reames*, Campbell College; *Gwen Hester*, Meredith; and *Bernie Farmer*, State College. Good luck to *Joanne Stevens* who left the Department to join her husband in Rockingham. The Department is interviewing applicants to fill a number of vacancies resulting from the above departures. Welcome to *Ann Williams*, a graduate of the Moore Institute of Arts in Philadelphia, who recently joined Photogrammetry. Congratulations to *John* and Lillian *Isley*, who recenty moved into a new home in Cary and were blessed August 5 with their first child, John Mitchell, who weighed in at 8 lbs., 4 oz.

FEDERAL CONTACT—Get well wishes are extended to *J. E. Henderson*, Highway Engineer III, who recently underwent a serious operation at Rex Hospital.

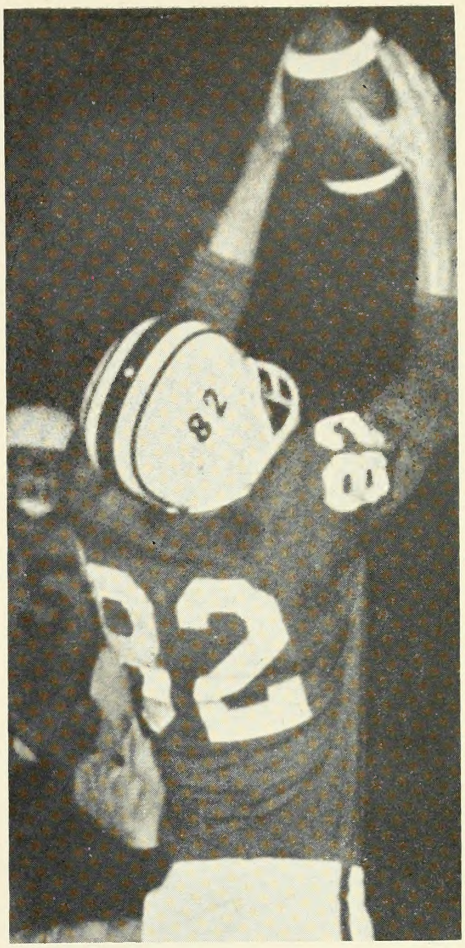
BRIDGE MAINTENANCE—Office personnel enjoyed a fine weiner roast, Oct. 10, at Pullen Park. Employees were glad to see *Kay Satterwhite*, former secretary in the Department, who stopped by for a chat recently. Highway employees were sorry to hear of the death, Sept. 27, of retired skilled bridgeman, *William Thomas Shumate*, of Lansing. Mr. Shumate was a loyal and respected employee with the Commission for 25 years.

SAFETY—Good luck to *Polly Hildebrand*, steno in the Department, who resigned September 16. *Mrs. Gloria Anderson* joined Safety October 5 as Polly's replacement. Tarvia Jones attended the National Safety Council Congress October 17-22 in Chicago, Illinois, Ann Sterling is taking as extension course in Phychology at State College.

TRAFFIC ENGINEERING—Congratulations to Department Head *Robert Burch*, who was elected Vice-President of the Institute of Traffic Engineers at the Group's annual meeting in Chicago. *Emily Blount* reports a grand fall vacation with her sister in New York City sightseeing and play-going.

REPRODUCTION — *Charles Lassiter* and his wife joined a house party at Wrightsville Beach the first week in October. They report a delightful time fishing, swimming and consuming lots of delicious seafood. *Earl Williams* has been enjoying the fall crabbing and shrimping season by motoring down to Bear Creek every weekend. A speedy recovery is wished for *Garland Mitchell* who has been on sick leave for several weeks.

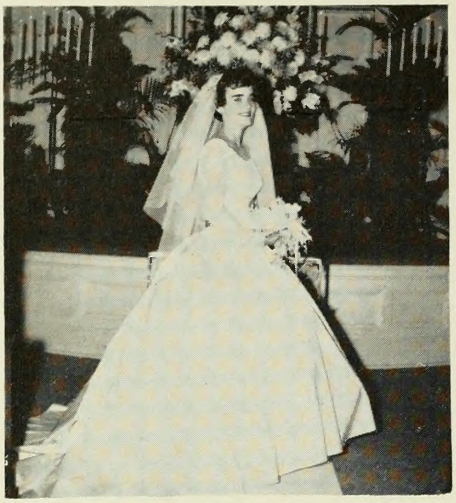
ADVANCE PLANNING—*R. J. Kimley* attended a meeting of the Highway Research Board in Washington, D. C. Sept. 20-21 and 22. Mr. and Mrs. *George Stephens* spent the week of Oct. 24-28 in Philadelphia, Pa., where George attended the annual meeting of the American Institute of Planners. Welcome to *Allen Holden* from Asheville, and *Fred Lingle* of Salisbury, two new Draftsmen in the Department. Allen has been married a month to the former Sara Canady of Fuquay Springs, who is a steno II with Public Instruction. Fred is engaged to marry Miss Grace E. Piver of Asheville two days after Thanksgiving, Nov. 26. Both employees attended N. C. State College.



Wake Forest High School's Cameron Lee (82), makes a sensational catch in the end zone for clinching touchdown in a recent game against Fuquay. Young Lee is the son of Chief Engineer and Mrs. Cameron Lee.

PERSONNEL—New Personnel Assistant in the Department is *Bob Smith*. Bob lives with his wife and child in Cary.

MATERIALS & TESTS—The Lab is sorry to lose one of its most valued employees, *H. Fred Waller, Jr.*, Materials Engineer II, who resigned recently to join Esso Standard Oil Company in Richmond, Virginia. A permanent employee since Oct. 1, 1949, Fred will be greatly missed by his many friends and coworkers in Raleigh. Upon his departure, Fred was presented a portable typewriter by fellow employees. Welcome to *Al Lewis*, new clerk in the office, and to *Mrs. Linda MacGee* and *Mrs. Janet Adams*, replacements for Chemists *Sarah C. Bryan* and *Rita S. Farmer*, who resigned in October. Congratulations to the *M. D. Barbours* upon the birth of a son, October 7. Barbour is a Materials Engineer in the Bituminous Lab.



Mrs. Lloyd Ray Morgan is the former Gloria Stallings, daughter of Maintenance Supervisory Foreman and Mrs. Jimmy S. Stallings of Hertford.

DIVISION ONE

By M. ELWOOD COPELAND

Division Correspondent

A WELCOME is extended to *William B. H. Sawyer of* Elizabeth City, new mechanic at the Hertford Equipment Shop. He formerly worked with the Perry Motor Company.

CONGRATULATIONS to Mr. and *Mrs. Walter Humphlett, Jr.*, on the birth of their second child, Walter Lee, III, born Sept. 19. Mrs. Humphlett is on leave as a steno-clerk.

RECENT PROMOTIONS have included: *W. Earl Moore*, to Highway Engineer I, *W. C. Snell* and *R. L. Pinkham* have been promoted also. Best wishes to *Posie L. Moore*, Mechanic II, who retired in September after 24 years of service.

GET WELL WISHES are extended to: *Miss Dorothy Gard, W. H. Batchelor, Wingate F. Smith, Hobson D. Carter, L. D. Cherry, L. M. Comstock, M. L. Morris*, and to *B. E. Mason*, who is nursing a fractured ankle. A speedy recovery is wished for Supervisory Foreman *Mathew Blake's* father, who has been sick for several months, and to *Mrs. Harry Phelps*, a patient at Washington County Hospital. It's good to have Harry back at work now.

WE WERE SADDENED by the death of *W. Ralph White*, on Sept. 7 after a short illness. He had been a mechanic in the Hertford Equipment Shop for 4½ years. Also, we wish to express sympathy to *Norman L. Washington*, whose father, Horace Washington of Hobgood, died in September, and to *W. F. Ange*, in the recent death of his father.

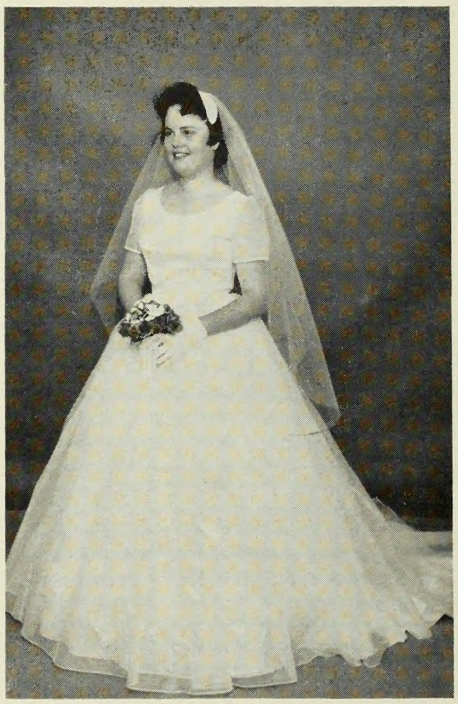
DIVISION TWO

By ROY D. FRANKS

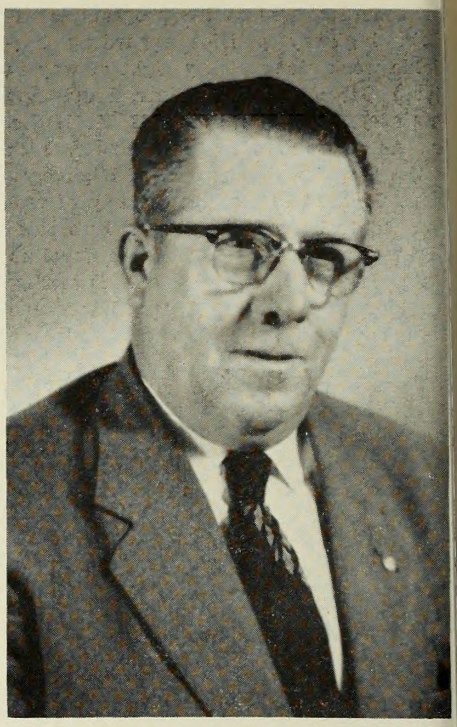
Division Correspondent

A BARBECUE SUPPER was held recently by the Pitt County Chapter of the employees association. Music for dancing was furnished by a string band. Out of town guests included Mr. and Mrs. *K. R. Scott.*

GET WELL WISHES go out to Mrs. *P. L. Fields*, Mrs. *J. L. Briley*, Mrs. *E. L. Tripp*, Mrs. *D. F. Johnson* and *O. W. McGowan*. Best wishes to each for a speedy recovery.



Mrs. William Everette Purvis, prior to her recent marriage, was Edna DeLozier Speight, daughter of Road Oil Supervisor and Mrs. Robert Cesler Speight of Ahoskie. The bride is a graduate of Ahoskie High School and Atlantic Christian College and is now a member of the faculty at Oak City High School.



One of our 30-year men is David Allen Carter, son of Dasy and the late J. L. Carter. A native of Duplin County, he attended Wallace High School and began his career with the State as a carpenter with the Bridge Department in 1930, under the supervision of O. F. Yount. He began working in the Equipment Department in 1945, under Equipment Superintendent W. J. Davis. Carter attends Camden Methodist Church, where he is president of the Men's Bible Class. He makes his home in Elizabeth City and enjoys hunting and fishing.

DIVISION THREE

By IRENE HEWETT

Division Correspondent

CONGRATULATIONS to our newlyweds, Mr. and Mrs. James Ray Ginn. The bride is the former Joy Daughtry Westbrook, daughter of Machine Operator and Mrs. *Grover A. Westbrook*, of Sampson County.

LADIES NIGHT was held recently by the Duplin County chapter of the employees association.

FLORIDA was the destination recently of *Mrs. Leo Wallace*, secretary to our division engineer. While away, she visited Mrs. Irene Worley, former secretary to the Right-of-Way Engineer, who lives

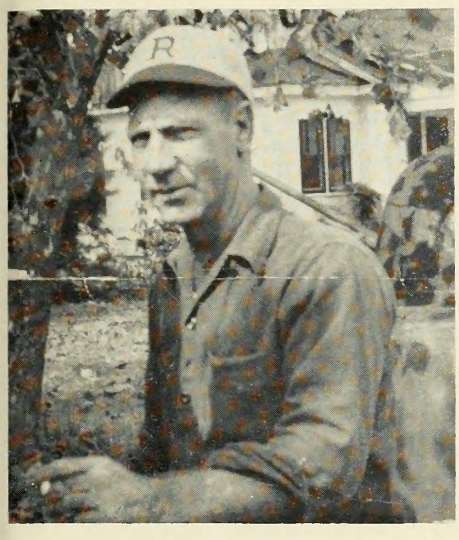
in Jacksonville now and works for Atlantic Coast Line. *Mrs. Minnie May Smith* of the Clinton office, had a most enjoyable visit with her son-in-law and daughter and family in Pittsfield, Mass. The *Joe Bannermans* spent a few days in the mountains recently.

ON SICK LEAVE recently have been the following: *H. B. Rouse, J. D. Kornegay, Allen Bass, Grady Simmons* and *W. J. Wilkerson.*

A RECENT VISITOR in the Clinton office was *Jessie Hall,* of the Construction Department, who has been transferred to Graham.

SETTLED for the winter in a lovely brick home is our Division Engineer, *T. J. McKim,* and his wife, just two doors away from their daughter and grandchildren.

THANKS from your correspondent, to all who were so kind in the recent loss of my father.



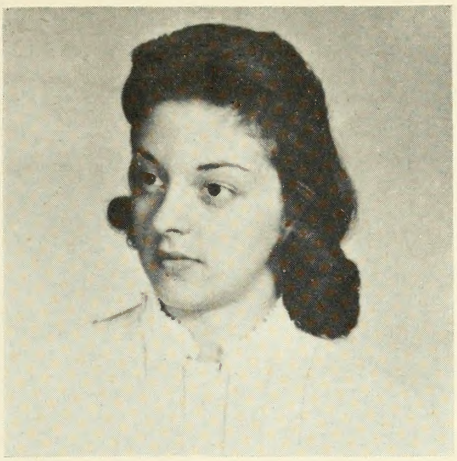
Lonis Frank Hines, Mechanic in Division Three, retired in June after 29 years of continuous service. He and his wife, the former Trixie Rouse, have three children and seven grandchildren. They live on Masonboro Sound.

DIVISION FOUR

By AUDREY L. PERRY

Division Correspondent

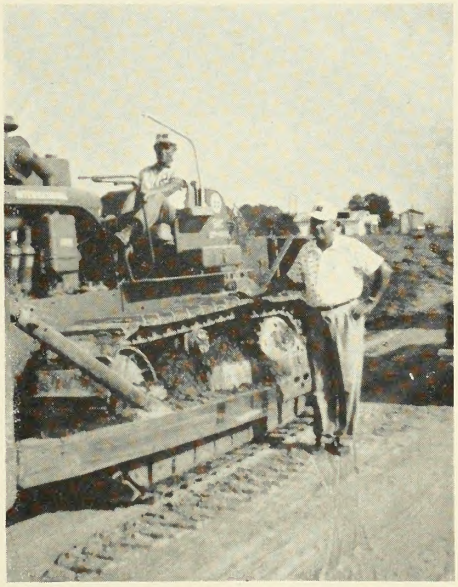
HURRICANE DONNA interrupted an enjoyable vacation for Office Engineer and Mrs. *S. R. Livesay,* their son-in-law and daughter. The four of them rode out the storm at Oceana Motel. These people chose the mountains for their vacations: *J. I. Lynch, Jr., Paul Mitchell* and *Dixie Toler,* and *J. V. Walters* went to the coast on a fishing trip. *Katie Braswell* and



Delores Barrow, daughter of Maintenance Foreman and Mrs. Lee Roy Barrow of Edenton, has returned to East Carolina College in Greenville, where she is a sophomore majoring in elementary education. She is a graduate of Edenton Junior-Senior High School, where she was in the top ten of her class, and served as president of the Future Teachers of America.

Ralph Barnes vacationed at their homes. *Mrs. Betty Simon* and husband Don visited relatives in Wellsboro, Pa., on their vacation. Mr. and Mrs. *E. P. Koonce* vacationed in Jacksonville.

SYMPATHY is extended to the *J. B. Perrys,* whose four-year daughter was fatally injured in an automobile accident; to truck driver *William L. Mosley,* in the death of his wife; and to *S. L. Harlow,* whose step-father died recently.



Johnston County Maintenance Foreman William H. Woodall, standing, recently received the 35-year service emblem. Seated is P. W. Thompson, Machine Operator, who has been with the Highway Department for 14 years.

WELCOME to *Preston E. Lane,* Highway Engineer I, who is assisting District Engineer *E. J. Butler,* and to *Owen Etheridge* of the Location Department who has returned after working in North Wilkesboro for the past seven months. *Marvin Matthews* is the new employee in Location.

GLAD TO HAVE *Ralph Willis, Leland R. Davis, Paul Fulghum* and *Kenneth Gay* back at work after illness. Get well wishes are extended to Mrs. Marie Rogers,wife of Machine Operator *Troy L. Rogers.*

OFF TO COLLEGE are the following members of our highway families: Mildred "Mimi" Dawson, daughter of Assistant Division Engineer *R. W. Dawson,* a freshman at Woman's College; Mary Beth Nichols, daughter of Prison Supervisor *H. B. Nichols,* senior at East Carolina College; and Alice Juanita Cochrane, daughter of *Mrs. Frances P. Cochrane,* freshman at East Carolina College.



Robin Ann Bailey is the young daughter of Motor Grader Operator and Mrs. Paul Bailey, Jr., of Rt. 1, Raleigh. In celebration of her first birthday, Paul gave her some ducks which she likes very much. Robin's mother formerly worked for the Motor Vehicles Department for about six years.

DIVISION FIVE

By PEGGY BRIGHT

Division Correspondent

BIRTHDAY HONORS were shared by *Quinton L. Sorrell* and *Kirk M. Duncan,* when they were presented a birthday cake by members of the Division Office staff.

GOOD LUCK to *Harry L. Carden,* who transferred to the Maintenance Department at Butner Hospital after more than 13 years with the Maintenance Depart-



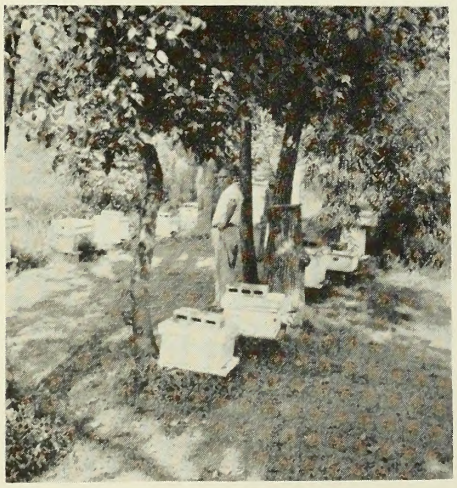
SUCH A LAZY DAY! Gregory Alan Williams takes advantage of the warm autumn sun to relax and take it easy. He's the son of Road Oil Clerk and Mrs. Curtis R. Williams of Division 5.

ment in Granville County. Right-of-Way's loss is Bridge Design Dept's gain, with the transfer of *Shanks Bradsher*. It was good to see the smiling face of former Road Oil Supervisor James A McQueen, who paid us a visit recently.

CIGARS were enjoyed by Granville County employees when the *Willie M. Coles* proudly announced the birth of a son, Lonnie Morris, born August 9th. Mr. and Mrs. *Bernice Turner* have announced the birth of a son, making three boys and a girl for the Turners.

FISHING was good, when *B. F. Vaughan, E. T. Painter, G. G. Rhew* and *S. B. Peed* went on a fishing trip to Morehead, and *C. W. Crissman* reports a good catch at Carolina Beach.

BACK AT WORK after illness are *H. E. Hicks, Leroy Cates, Kirk Duncan, C. T. Fraley L. L. Lawrence* and *W. B. Smoak*. Sorry to hear that *Harry Glickman* is hospitalized following a heart attack. Maintenance Supervisor *Kyle Jones* is reported improving and our Division Engineer, *J. W. Jenkins*, continues to improve at his home.



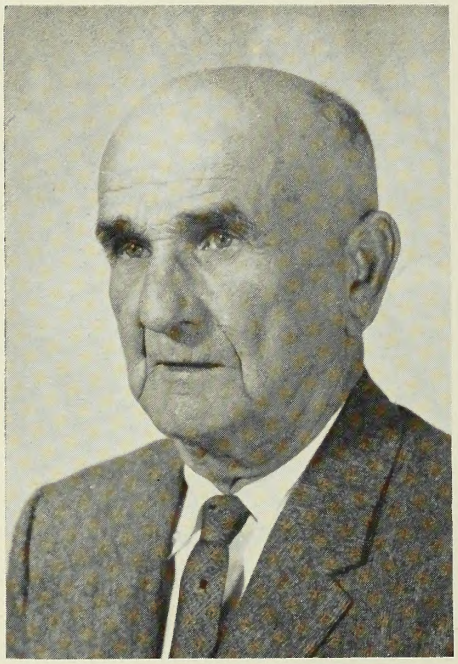
Eugene Neville is shown here in his grove of bee hives. Eugene is employed at the Method office, Division Five.

PERSON COUNTY employees report tht *R. J. Woody* has been named Safety Chairman, and *E. L. Humphries, H. G. Harris, R. W. Hamlin* and *Wilbur Kendrick* have been named to his committee.

GOOD LUCK to *Raymond Tippett*, who retired October 1st, aftr 38 years of service with the county and the State.

ON THE GO: Right of Way Agent and Mrs *W. D. Moon* spent a recent vacation in Pennsylvania, Mr. and Mrs. *Leon Harris* and family visited in Alxandria, Va., with her sister and family who are leaving soon for duty in Germany. District Engineer and Mrs. *C. L. Edwards* also vacationed recently.

OUR SYMPATHY goes out to Machine Operator *E. L. Williams*, whose mother died recently.



James M. Morton

DIVISION SEVEN

By P. L. WELCH

Division Correspondent

FATHER TIME marked up the score of 65, bringing about the retirement of our friend and co-worker, *James M. Morton*. He began his work with the Highway Department in 1923, in the Old Fifth District under John D. Waldrop, in Greensboro. Under the revised set-up he moved from Road Machine Operator to Section Foreman, Floating Gang Foreman, Supervisory Foreman and in 1944, he became Road Maintenance Supervisor, a post he held until his retirement in September 1960. A barbecue dinner at the District Equipment Shop in Reidsville honored Mr. Morton on his retirement. He was presented with a piece of luggage from the highway employees in the county and a radio and sport shirt by supervisory personnel from Division 7. Mr. Morton's successor is *O. N. Alley*, who has been with the Highway Department for 23 years.

THE BEACH was the destination of some of our fall vacationers. District Engineer and Mrs. *C. C. Painter* and two sons spent a week at Myrtle Beach; Mr. and Mrs. *Calvin W. Howard* and daughter Melanie Caryl, spent a week at Carolina Beach, and the *J. B. Taylors* visited Morehead on a fishing trip.

A SPEEDY RECOVERY is wished for Maintenance Foreman *Charles E. Murphy* of Caswell County, who is out sick.

WELCOME to *Ned O. Chapman*, who has been transferred to District I under the training program.

THE BEST of luck to *W. E. Parrish*, who has resigned to work with a private contractor, and to *D. W. Dawson*, who is working for the University of North Carolina.

HEALTH AND HAPPINESS is wished for Scott Campbell, who retired in July and for *Haywood W. Whitfield*, who retires in November.

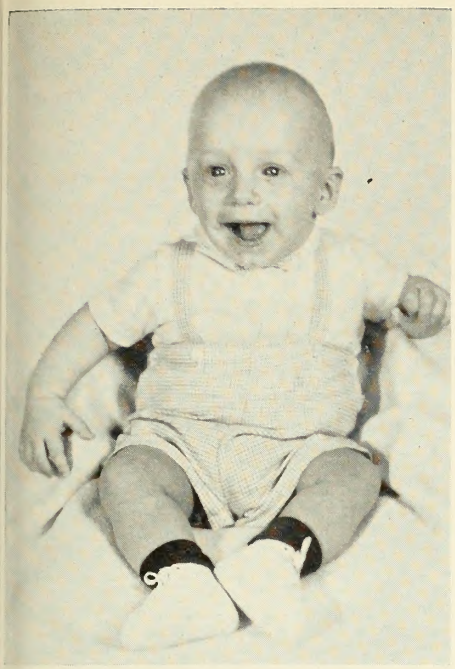
CONDOLENCES to the family of *William E. Holland*, who died Sept. 13 in a Butner hospital after a long illness. He worked for the Highway Dpartment for 20 years prior to his retirement in 1958. We extend sympathy also to *William Haywood Crabtree's* family, in his recent death. A former employee in Alamance County, he retired in 1948.

DIVISION EIGHT

By VIRGINIA S. WILLIAMSON

Division Correspondent

OFFICE PERSONNEL and members of their families enjoyed a recent picnic at Pinebluff Lake. The menu consisted of lemonade, coffee, fried chicken, ham, salads, vegetables, sandwiches, biscuits, muffins, cakes,, pies, etc. Our Division Engineer expressed the belief that his division has some of the best cooks to be found anywhere!



Ronald Steven Clapp is the seven month old son of Mr. and Mrs. Ronald Clapp of Swepsonville. Daddy works in the Construction Department.

ONE OF THE PROUDEST folks around is Resident Engineer *T. K. Smith*, who became "grandpa" for the first time in August, with a grandson, Edward Dameron Crowder, born in Atlanta, and a granddaughter, Loraine Elizabeth Smith, born in Los Angeles.

BACK AT SCHOOL is *Betty Lou McFarland*, summertime office helper, and now a senior at Guilford College. Employees gave her a send-off with a party and a gift of money. Right-of-Way agent *Carl R. Acker, Jr.*, reports burning the midnight oil while attending the Appraisal School in Connecticut. The *Ed Dardens* were proud spectators during summer graduation exercises at the University of South Carolina. Their son, Eddie, was a member of the graduating class, and expects to enter service soon.

WELCOME to *Lois Godfrey*, new secretary in right-of-way. With that big smile, she can't stay "new" very long! She replaces *Janice Hemmens*, who resigned to become Mrs. Kennie Meeks and move to Norfolk, Va.

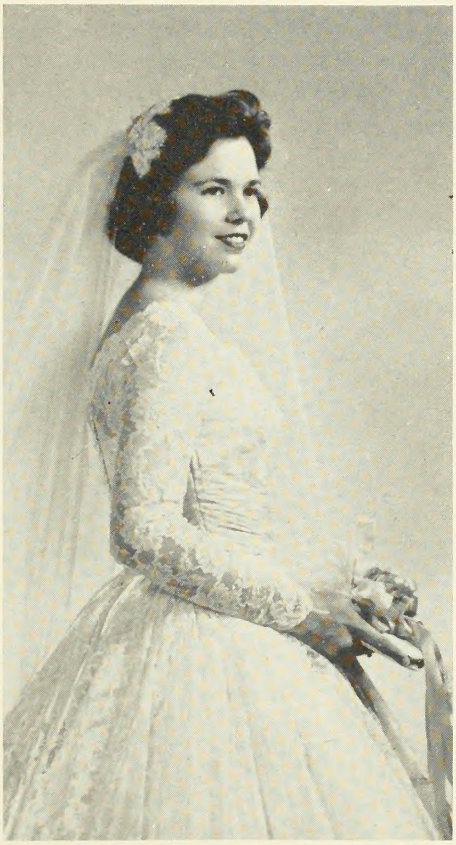
VACATIONERS include *Joe Adams* and family, at Holden Beach; the *Ed Dardens* who spent a few days at Cherry Grove Beach, only to be interrupted by Hurricane Donna. Along with others in the area, they rode out the storm at nearby Loris. Our Division Engineer, *T. C. Johnston*, and his wife, Belle, spent a week at Cherry Grove Beach the first vacation he had taken since Japan surrendered, we understand. *Bill Grant* of District III spent a few days at his old home in Bryson City.

OUR DEEPEST SYMPATHY to the family of *H. C. Davis*, District I employee who drowned recently while out seining. He was swimming in 10 feet of water when the accident happened, called for help, but went under before assistance could be given.

ON THE ROAD to recovery is Landscape Supervisor *D. M. Kunce*, who is recuperating at his home following surgery at the Veterans Hospital. *Major Jackson*, Prison Supervisor, reports that his mother is improving following a bout with pneumonia.

IN THE NEWS recently was *Lee Wicker* of Sanford, whose picture appeared in the paper in honor of his 35 years of service with the Highway Department. He is the first Lee County man to receive the 35-year award.

CONGRATULATIONS to the *Horace Teagues*, who have moved into their new home. She is a secretary in the District II office. Best wishes, also, to *Louis Murrow*, Road Oil Foreman, who is a proud papa again.



Mrs. G. C. Hall, Jr., prior to her recent marriage was Lucy Ann Knight of Stokesdale. The groom works in the Division Office at Greensboro and his wife teaches school in Mayodan.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

THE WINDY CITY was the destination of Mr. and Mrs. *J. W. Davenport*, who visited his brother in Chicago and enjoyed many sightseeing trips while away. Headed in the opposite direction is Division Engineer *R. B. Fitzgerald*, whose destination is Biloxi, Miss., and the SASHO convention. These men report fishing trips to the coast, but no news on their luck: *W. D. Rothrock*, *A. L. Myers*, *O. D. Rentz* and *Horace Jernigan*. Labor Day weekend was observed my many. Among those at Myrtle Beach were *Alice Watson* of Appraisal Section, and *Jayne Smith*, stenographer in the Division office.



Mary Virginia Kennedy is the youngest of the Kennedy girls and thongh she claims no relation to the Kennedys of political fame, she's the pride and joy of her Grandfather, Resident Engineer J. A. Kennedy of Salisbury.

NEW ARRIVALS include Anita Dawn, first child of Mr. and Mrs. *John R. Fritts*, who was born Sept. 4. 'Pop' works in the Construction Department. Congratulations also to Mr. and Mrs. *J. C. Waller*, on the birth of a daughter, and to Mr. and Mrs. C. R. Burrell, on the birth of a son.

CONGRATULATIONS to our newlyweds, Mr. and Mrs. *Harry R. Fritts*, She is the former Phyllis Gayle Miller of Thomasville. Harry works in our Construction Department.

OUR SYMPATHY goes out to the family of *Murray Roscoe Smart*, who died Sept. 25th. He worked for the Maintenance Department in Stokes County, but had been on leave of absence due to illness since May 24th.

FAMILY NIGHT was observed recently by the Rowan County chapter of the employees association. Barbecue was served to approximately 300 employees and their families. Door prizes included a transistor radio and an electric toaster.

A HEARTY WELCOME to *B. S. Williams*, who has returned to work after a

month-long illness. Among the newcomers to the Appraisal Department is *Mrs. Nell Murphy*, from the Raleigh Office. Her husband Jim is a ministerial student at Wake Forest. They have two children, Jimmy and Nancy. Another newcomer is *James P. Rumley*, Division Appraiser, who formerly worked for a real estate firm in Winston-Salem. He is the father of a four-year-old son, Bruce. *O. James Clontz*, staff appraiser, formerly worked as Assistant Chief Appraiser for the FHA in Fayetteville. He has three children, Cynthia, Jimmy and Sarah.

A VETERAN of nearly 30 years with the Highway Department, *J. A. Thompson*, Maintenance Foreman in Davidson County, retired in August and we wish him health and happiness in his retirement.

DIVISION TEN

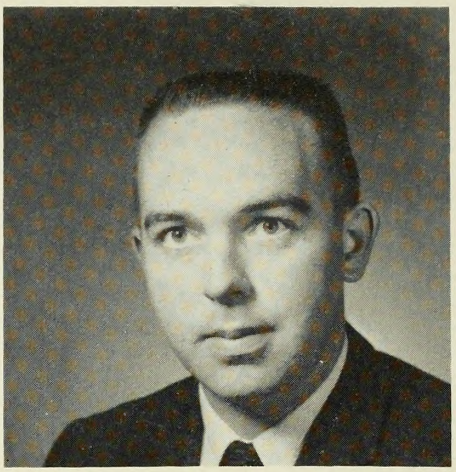
By J. W. JONES

Division Correspondent

WE ARE GLAD that Bennie, son of *William V. Hudson* and Brenda Gail, daughter of *William F. Hornback*, are improving after recent illness. The good news is that J. H. "Sonny" White, son of Maintenance Supervisor *John H. White*, is showing improvement since suffering severe injuries in an automobile accident. A speedy recovery is wished for *James H. Flake*, who has been on the sick list since February and has under gone several operations. *Cicero Morris* had the misfortune of breaking his wrist on the job, but now is back at work.



This happy little girl is Melanie Caryl Howard, three-year-old daughter of Mr. and Mrs. Calvin W. Howard. Mommy Julia is a stenographer in the Graham District Office.



Carl R. "Buddy" McCorkle, son of Equipment Superintendent and Mrs. P. R. McCorkle of Charlotte is now on active duty with the U. S. Army. A graduate of Wake Forest College, he worked with American Discount Auto Finance Company at the time of his induction. Buddy is well-known to many highway personnel, since he worked with the Construction Department for several summers while attending college.

Another on-the-job injury was that of *Joe A. Cook*, who sprained his ankle. *Spencer C. Mauldin* and *Lee W. Williams* are back at work after illness.

IT'S ANOTHER GIRL for Mr. and Mrs. *Claude B. Maness*, who have three now.

GOOD LUCK to *J. D. Redfearn*, Anson County Maintenance Foreman, who retired recently. We are going to miss him but wish him good health and happiness in his retirement. He had been with the Highway Department for more than 20 years. Another retired employee, Peter Preston Brock, was pictured in the paper recently with his singing dog.

THE NATION'S CAPITAL was visited by several highway families recently. The *Doug Sassers* visited friends and toured points of interest there and in Alexandria, Va. The *W. T. Smith* family spent a few days in Washington visiting their daughter, her husband and their only grandaughter.

SYMPATHY is extended to the family of *Dewey B. Starnes*, who died recently. He had been employed for 10 years in the Road Oil Department and will be missed by his many friends. Condolences also to the family of *J. B. Thornburg*, Mecklenburg County Maintenance Foreman who died recently at his home, and to *Jessie W. Griffin* in the death of his wife.

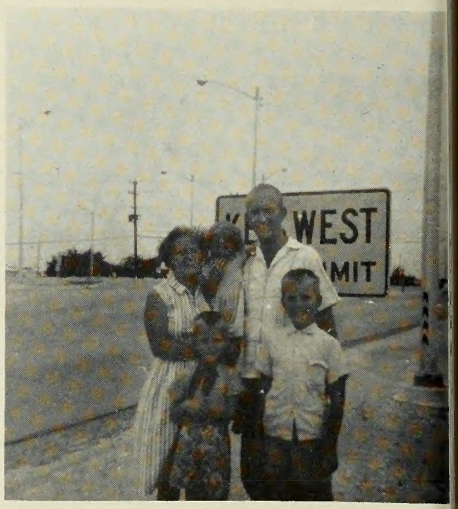
DIVISION ELEVEN

By CORA LEE GREER

Division Correspondent

A CELEBRATION was held at the Yadkin Community Building, honoring *J. P. Bray*, gang foreman, on his 65th birthday. About 250 highway friends and relatives attended.

GET WELL WISHES are extended to *DeWitt Wiles*, *T. C. Hauser* and *J. L. Caudill*.



BEFORE THE STORM—D. A. Junghans of the Division 10 Construction Department, and his family, spent their vacation in Florida, and are pictured in Key West, just before Hurricane Donna struck that city.



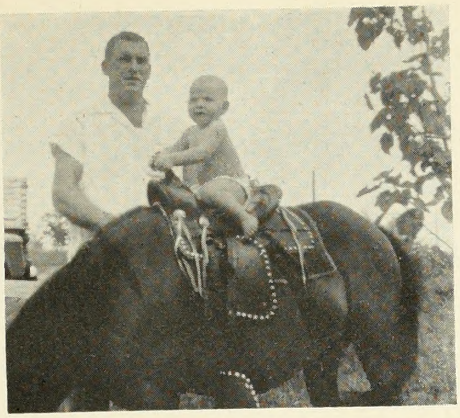
Sign Supervisor W. J. Watts is shown here with his family. Kim may look a little small, but he's pretty big for a four-year-old.

BEST WISHES to *Tommy Cook* of Watauga County, and Jean Dotson, who were married Sept. 30 and are making their home in Boone.

SYMPATHY is extended to *T. C. Calloway* in the loss of his wife, and to our Division Engineer *J. E. Doughton*, whose brother died recently.



Mary C. Kirby, pretty secretary in the Boone office, recently became Mrs. James B. Southerland in a ceremony performed at York, S. C. They are making their home with his parents at Creston.



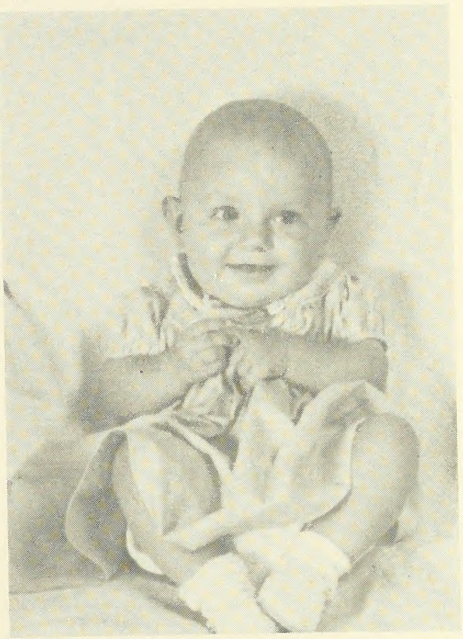
The young cowgirl in this picture is Kim Byers, who is quite fond of pony riding already. Her daddy, Marvin Byers, who works with the Maintenance Department in Division 12, stands beside the pony.

IT'S A GIRL for the *G. C. Rupards*. Sheila Ann was born August 13 in Statesville. Daddy is a machine operator in Iredell County.

A WELCOME visitor at the *P. J. Corpening* home recently was their only son, Alex, who was en route from Ft. Sill, Okla., to Fort Jackson, S. C., for military training.

DIVISION ENGINEER and Mrs. *E. L. Kemper* ars busy making plans to attend the SASHO meeting in Biloxi, Miss. Florida was the vacation spot chosen by Resident Engineer *K. E. Mauney* and family.

CONGRATULATIONS to *Royce Ernest Bryant* of District I Maintenance, who has been promoted to Machine Operator II. *Hal Max Gardner* and *J. F. Hollifield* have been employed as engineering aides in Shelby and *Harold Sprinkle* is a new engineering aide at Statesville. Welcome to Shelby, Mr. and Mrs. *Raymond Atkins* and young daughter. He is employed in Right of Way.



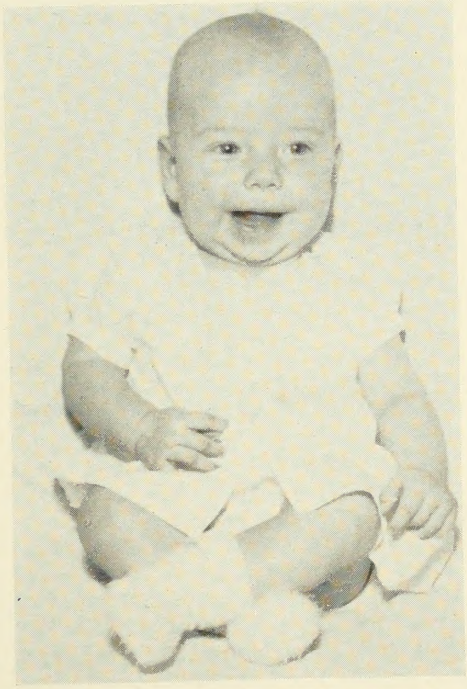
Diane King is the young daughter of Mr. and Mrs. E. G. King. Her father works with the Road Oil Department in the Twelfth Division.

DIVISION TWELVE

By JEAN CLINE

Division Correspondent

MANY FRIENDS of District Engineer *P. D. Miller* will be happy to learn that he is now at his home, 634 Holland Drive, Statesville, after a long stay at Iredell Memorial Hospital. His brother, John D. Miller, a former highway employee, and Mrs. Miller, of Ahoskie, are spending some time with him. Bridge Foreman *U. F. Poovey* of Catawba County is reported recovering nicely following a serious illness. Little Scott Hughes, son of Mr. and Mrs. *Miles Hughes* of Shelby suffered a broken leg in a recent accident. Others who have been on the sick list include: *J. B. Robinette, J. R. Robinson*, Mrs. *A. C. Childers, R. L. Sherrill, G. R. Finger, H. T. Teague, Mrs. W. P. Lineberger*, Mrs. *Ralph Setzer, T. C. Hurley, J. P. Padgett's son* Kenneth and *F. L. Moore's* son Fred. We wish a speedy recovery for each one, as well as for *Walter Ledford*, who has been on sick leave since July 15th.



Cynthia Ann Bowles is the daughter of Mr. and Mrs. Gilbert Bowles. Her daddy works in the Statesville residency.

DIVISION THIRTEEN

By DAN TURNER

Division Correspondent

THE STORK has been pretty busy. Congratulations are in order for these proud parents: Resident Engineer and Mrs. *Earl F. Hoover*, a son, Earl Christopher, born July 16; Mr. and Mrs. *Maurice Young*, a son, Thomas Edward, born June 4; and Mr. and Mrs. *Yates Dysart*, a daughter, Donna Lynn, born Sept. 12. Congratulations, also, to *Thimas Tipton* of Yancey County, who has a new granddaughter.

SERVICE PINS were presented to *C. C. Foster*, (25 years); *E. L. McFarland*, (10 years) and *E. J. Parham* (10 years), at the recent supper meeting of the Buncombe County Chapter of the employees association. The meeting was held at the Recreation Park in Asheville.

TWO HIGHWAY families were joined together recently when Nita Gale Miller, daughter of *Charlie Miller*, Yancey Coun-



This picture was made during a recent supper meeting of the Buncombe County chapter of the employees association. Left to right: Mr. and Mrs. G. E. Baskerville; M. A. Compton, R. M. Stanberry and J. T. Knight. Also in the picture are the two Baskerville children.

ty Bulldozer operator, was married to Stanley Deyton, son of *Birdette Deyton* who is with Landscape.

NEW OFFICERS of the Mitchell County chapter, employees association, are: *Jack Blevins*, chairman; *Paul Geouge*, vice chairman and *Marvin McKinney*, secretary-treasurer.

OUR CONDOLENCES to these people: the *W. N. Coles*, in the loss of their son, Bruce; to *G. C. Thomas* in the death of his mother; to Major J. C. Harris, Prison Supervisor, whose brother died recently, and to *Tulsa Sparks*, whose brother died recently.

ON THE MEND is *H. D. Plant* of the Maintenance Department, who was injured in an automobile accident. *Van Deal* is back at work after illness, and *J. W. Moss* and *Roland Peek* have returned to work following extended illnesses. Still on the sick list are *W. A. Brown* and *F. F. McAbee*.

MAINTENANCE employees *Paul Revis* and *Vance Proffitt* have retired on disability. *W. B. Edwards* has returned to Div. 11 after a pleasant hitch in the Burnsville construction office.



Bonnie Ruth Cole is a new employee in the Appraisal Section in Asheville. She attended Lee Edwards High School and completed the secretarial science course at Mars Hill College where she graduated in May 1960.

DIVISION FOURTEEN

By D. V. RAXTER

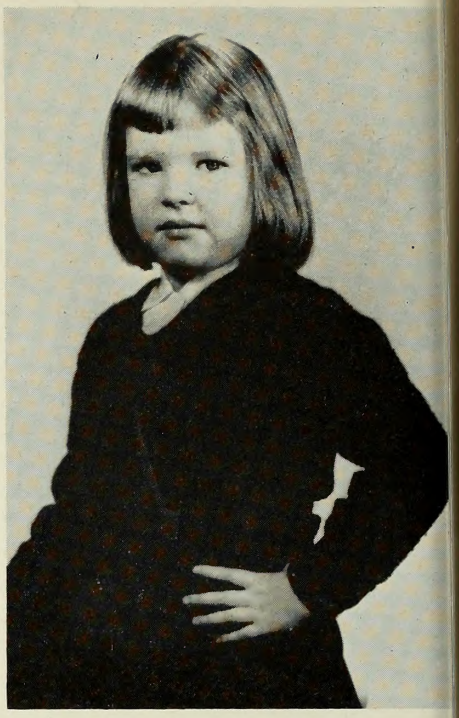
Division Correspondent

THE BIG CITY was the vacation spot of Maintenance Supervisor and Mrs. *C. J. Beck* and daughter Lynda. They report a delightful time in New York City, especially the tour of UN headquarters and the trip to the Statue of Liberty. Truck Driver and Mrs. *Glenn Hendrix* of Cherokee County spent a recent vacation in Florida, while the *J. R. Mehaffeys* visited their son's family in New Jersey. Hurricane Donna struck while they were there and Mr. Mehaffey said that this was the first time he was able to stay at home while highway crews cleaned up debris and trees from the roads. The *R. B. Johnsons* visited relatives in Maryland recently. Mechanic and Mrs. *Ralph Stirewalt* and little daughter were recent guests of his mother in Salisbury and Supervisor and Mrs. *Howard E. Barnard* and Bridge Foreman *C. W. Rink* report a fine vacation the last of September at Atlantic Beach. Recent visitors in the *Guy Hill* home were Mr. and Mrs. Ronald Hill and children of Spokane, Wash.



Robert R. West

RETIRED EMPLOYEE Robert R. West, of Rt. 1, Columbus, is pictured in our news. He retired from highway work in July of this year. West went to work for the Highway Department in 1921 as a truck driver and worked until 1928, when he went to work for the county. He returned to the Highway Department in 1931 as a road machine operator and became a shovel operator in 1946. West is married to the former Addie Case and they have four children. He is a member of Midway Baptist Church, Woodmen of the World and the Masonic Lodge. He reports he is enjoying his retirement and plans to do a lot of fishing and hunting.



ALL DRESSED UP but nowhere to go! This is the situation young Donna Marie McCracken finds herself in. Donna was selected mascot for the Appalachian State Teachers College athletic teams, but her family has moved now to Dillsboro, and her appearances with the cheerleaders and teams is somewhat reduced. Her father, Don McCracken, works for the Right of Way Department in Division 14 and her mother is teaching at Sylva Elementary School.

CONGRATULATIONS to Mr. and Mrs. *Sammy Brittain* on the birth of a daughter September 2. Sammy is a truck driver in Henderson County. Birthday greetings are extended to Truck Drivers *Horace Hembree* and *Howard Killian*.

A SPEEDY RECOVERY is wished for *Charles T. Case* of Henderson County and *Garland C. Whitmire* of Transylvania County, who underwent surgery recently. Swain County employees are happy to have *Fred Breedlove* back at work after serious illness.

HEARTFELT SYMPATHY is extended to Powderman *Brown Caldwell*, in the sudden death of his wife.

A four-year-old received a severe sunburn and it had reached the peeling-off stage.

His mother heard him saying to himself as he washed for dinner: "Only four years old and wearing out already."

On Outer Banks:

Fishing Camp Is Headquarters For Highway Survey Party

A fishing camp on remote Portsmouth Island was turned into headquarters for a highway survey team recently.

The men lived in the small fishing camp for about six weeks making surveys on about 45 miles of land along the Outer Banks from Cape Lookout to the northern tip of Portsmouth Island.

The aerial photograph and ground control work was done by the Photogrammetry Section of the Highway Department, in cooperation with the Corps of Army Engineers, the U. S. Coast & Geodetic Survey and the North Carolina Department of Water Resources. Topographic mapping from these photographs is being handled now in the Photogrammetry Section and is expected to be turned over to the Water Resources Board early next year.

Unlike most survey assignments, this job required many unusual tools. For instance, some 200 used automobile tires were secured from the Equipment Department for use in marking pertinent areas on the ground during aerial photography sessions. Some 3,000 feet of piano wire was used as a giant measuring chain, and many jeeps and boats were pressed into service for maneuvering on the islands.

Many days the men had to wade ashore from as far away as ½ mile out, due to low water in the area, sometimes no deeper than a foot. Water was not the only obstacle, however. The area where the work was being done is also used by jet pilots from the Marine Corps air base at Cherry Point, and so the highway plane had to do its flying and photography between the hours of 7 and 9 a.m., and from 3 until 5 p.m., in order to avoid traffic jams in the sky. With limited flying time, the photography also had to be taken at low tide, from an altitude of 3,000 feet, and on cloudless days as well.

The photography was taken cross-wise over the land, which ranges in width from a few hundred feet to as much as ¾ of a mile.

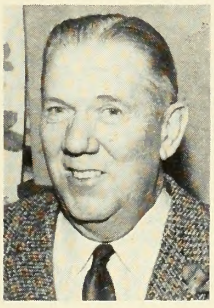
Although the " mission" had to be accomplished on a limited time schedule due to the jet traffic, the survey crew found the Marine Corps and private citizens very eager to cooperate. The Marines loaned a helicopter for transporting men and equipment into remote areas and supplied several walkie-talkies which were helpful in the operations on the islands.

The islanders (there are five families on Portsmouth) went all-out to help the highway crew. When the fishing camp was leased to the Highway Department, its owner went along with the deal as "chief cook and bottle-washer" and although the men say the food wasn't like home cooking, they thrived on it even though one member of the party attributes a recent case of ulcers to the lack of variety in his diet.

Mission accomplished, the sun-tanned highway sailors are happy to be back at home base once again.

Swain Patches Up Road And Romance

Secondary Roads Officer John P. Swain was called on recently by a Jackson County teenager to help patch up her road and her romance.



John P. Swain

The girl wrote Swain that her boy friend had stopped coming to see her since he had almost torn up his 1955 Ford on some pot-holes in the road leading to her home in Jackson County.

Swain got busy and ordered the road fixed up enough for smooth traveling at least.

Several weeks later, he received a letter of thanks. It read "Yes, Mike did come up to see me before I left for boarding school and I'm sure he'll come back up when I come home for vacations. Just remember that you made one person very happy and that I'll never forget it."

Hurricane Damage Totals $535,000

Damage to roads in Divisions 1, 2 and 3, from Hurricane Donna totaled $535,000.00 according to a report at the recent Highway Commission meeting in Raleigh.

In Division 1, headed by Division Engineer W. N. Spruill, damage was estimated at $85,000. Greatest damage in this division was to the Albermarle Sound bridge, which suffered broken piles when a portion of the Norfolk Southern Railroad trestle drifted upstream against the bridge. The bridge was closed for one day while repairs were made.

Division 2 suffered damages amounting to $200,00, according to Division Engineer C. W. Snell. Perhaps the most damage here was to the Beaufort-Morehead Causeway on US 70. A large portion of the causeway was ripped apart and much of the west-bound lane was destroyed.

Division Engineer T. J. McKim reported damages to roads in his division would total about $250,000. A washout occurred at Kenan Creek Bridge on US 74 at Wrightsville Beach, and there was sand on the pavement on portions of US 74 and US 76, at Wrightsville Beach, and on US 421 at Carolina Beach and Kure Beach.

Roadside Parks Impress Visitors

In addition to the many complimentary letters which are received regarding the highways in our State, many visitors also are impressed with the rest areas on our Interstate highways. The following is a letter from John H. Campbell of Tampa, Florida:

"Just a word of commendation for your lovely rest areas on your new Interstate 40.

"We have just returned home after touring your State and several others. It is a gratifying experience to be able to stop on such a highway and have such modern, clean and convenient facilities, at no cost to the small income bracket traveler.

"You and all your components are to be congratulated."

Widening, Resurfacing Projects Are Approved

Following recommendations from Division Engineers at recent meetings in Raleigh, the Highway Commission approved more than 65 projects for widening and resurfacing primary highways throughout the State.

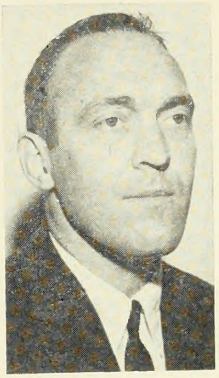
A complete list of the approved projects follows:

County	Route	Description
Camden—Currituck	NC 170	Resurfacing between Belcross and Sligo with bituminous concrete, 9 miles.
Currituck	NC 34	Resurfacing between Sligo and Marco.
Camden—Currituck	US 158	Resurfacing between Belcross and Marco, 12 miles.
Pasquotank	US 17	Installation of a 65" X 40" pipe arch under the highway, 2 miles south of Elizabeth City, to provide for more adequate drainage, lowering the flow line.
Craven	US 70	Resurfacing from the junction of NC 55 at Beaman's Fork to jurction of US 17 at New Bern, 5 miles.
Beaufort	US 264	Resurfacing on a 10-mile section of the highway between Bunyan and Belhaven.
Beaufort	NC 92	Widen existing pavement to a width of 24" with one minor relocation on that section from US 264 to the new Bath Creek Bridge.
Beaufort	NC 92	Construct a relocated N C 92 providing for 0.2 mile of new construction to eliminate traffic going through the congested area of Bath.
Onslow—Jones	US 17	Resurfacing between Jacksonville and Maysville, 12 miles.
Duplin	NC 11	Widen existing pavement to 24' widen 3 narrow bridges between Rockfish Creek and Kenansville, 17 miles.
New Hanover	SR 1411	Widen Wrightsville Avenue just out of Wilmington from 17' to 24' from the end of existing 24' pavement to US 74, 2.1 miles.
Sampson	US 701	Widen existing pavement to a 24' width and resurface, Clinton to Johnston County Line, 15.9 miles.
Duplin	US 117	The Commission at a previous meeting approved this project, however, upon investigation it was revealed the original funds were not sufficient to complete the project, therefore, approval of an additional $26,400.00 requested to complete the proposed widening of U S 117 to a 48' pavement in Rose Hill.
Nash	NC 97	Resurfacing from US 3-01A north of Rocky mount east to 1.0 mile west of Leggetts, 12.7 miles.
Halifax	US 258	Resurfacing from the curb and gutter section in south Scotland Neck, south to the Edgecombe County Line, 7.3 miles.
Wayne	US 117	Resurfacing 3 sections, old northbound lane, from NC 102 south of Goldsboro to revision south of Neuse River; from US 117A south of Goldsboro to intersection of US 70 west of Goldsboro; from intersection of US 70 west of Goldsboro to US 117A north of Goldsboro. This is a distance of 5.7 miles.
Johnston	NC 39	Resurfacing section from US 301 to the Wake County Line and 0.6 mile inside of Wake County, total of 19.5 miles. Major strengthening will be required on Sections, totaling 2.8 miles.
Edgecombe	NC 44	Resurfacing from US 258 at Princeville east to Coakley Road (SR 1512), 7.5 miles.
Edgecombe	NC 44	Resurfacing section from a point 0.1 miles west of NC 97 at Leggett to US 64 north of Tarboro.
Granville	US 15	Resurfacing from Durham - Granville County Line to Hester, 10.0 mi.
Warren	US 158	Widening and resurfacing with possible minor relocations, section from the intersection of US 158 Business near Macon to Littleton, 11.5 miles.
Durham	US 15 North	Widening and resurfacing 2.0 mile section of the connection from US 70 in Durham to US 15. (Geer Street and Ferrell Road).
Vance	Dabney	Improve this secondary road from the Henderson City Limits to the Bypass.
Durham	SR 1002	Reconstruct to provide for additional load carrying capacity, between Morrisville and Carpenter, 2.7 miles, by scarifying existing base, adding additional base material and paving
Robeson	NC 711	Resurfacing from the intersection of US 301 to the intersection of US 74 near Harper's Ferry 12.5 mi.
Bladen	NC 87	Revise vertical and horizontal alignment, raise fill and construct higher bridge at Hammonds Creek, widen entire section to a 24' width and resurface, from US 701 in Elizabethtown to a point just south of Hammonds Creek.
Robeson	NC 711	Revise alignment and replace bridge over Lumber River at Harpers Ferry; widen bridge at Bear Swamp.
Caswell	NC 86	Resurfacing old Project 5143. This is the final phase of stage construction project.
Rockingham	SR 2138	Strengthen with approximately 3" of bituminous concrete from US 220 at Mayodan to the new Mayodan Bypass, 1.8 miles.
Guilford	Friendly Rd.	Resurfacing section of the Friendly Road extension from Guilford College to the intersection of the Stage Coach Road, 1.4 miles.
Alamance	NC 49	Resurfacing section from Graham City Limits to the intersection of US 70A at Haw River, 1.6 miles.
Alamance	NC 62	Widen to a 24' width and resurface entire section from Burlington to Glencoe, 2 miles.
Guilford	NC 22	Widen existing pavement to a 24' width and resurface entire section from Pleasant Garden to intersection of NC 62 near Climax, 5.7 miles.
Scotland	US 74	Resurfacing from the Laurinburg Bypass to a point 2000'east of Scotland-Richmand County Line.

Moore	NC 27	Strengthen and resurface from Cartage west city limits west to junction of NC 705, 9.3 miles 22' in width.
Montgomery	NC 27A & NC 109	Revise in grade and alignment providing for 24' width pavement from NC 27 to Mt. Gilead, 8 miles.
Randolph	US 64	Widen to 44' curb and gutter section of US 64 in Ramseur from NC 49 to NC 22.
Davie	US 601	Resurfacing from Mocksville south to the Rowan County Line, 8 miles.
Forsyth	NC 150	Resurfacing from Winston - Salem south to the Davidson County Line, 5 miles.
Rowan	NC 152	Widen existing pavement to a width of 24' by pulverizing existing pavement and adding an additional 12" of base material for additional strength and paving on that section between NC 153 and China Grove, 4.7 miles.
Forsyth	NC 65	Grading and paving the unpaved section of NC 65 between NC 67 northeast to Bethania, 1.2 miles. The construction of a bridge to replace the present one - way steel truss structure.
Mecklenburg	US 21	Widen existing pavement to a 24' width, resurfacing entire section from the South Carolina Line east to the junction with US 521 in Pineville.
Mecklenburg	US 521	Widen existing pavement to a 24' width and resurface entire section from the junction of US 21 in Pineville south to the South Carolina Line, 5.2 miles.
Mecklenburg	NC 49	Replace two substandard bridges, relocate, grade and pave a 1.2 mile section of road to eliminate three dangerous curves, approx. 6 miles north of the South Carolina Line at Old Shell Plant location.
Cabarrus	NC 73	Widen existing pavement to a 24' width surfacing entire section from Concord eastward to a point 0.8 mile west of NC 49.
Surry	US 21	Resurfacing from the north city limits of Elkin to Roaring Cap.
Yadkin—Wilkes	US 421	Resurfacing between US 21 to a point 6 miles west of the Wilkes-Yadkin County Line, 14.0 miles.
Yadkin	NC 67	Resurfacing from Jonesville to the Forsyth-Yadkin County Line 24.2 miles.
Catawba	US 321	Resurfacing from US 70 to the Caldwell County Line, 2.6 miles.
Cleveland	NC 226	Resurfacing from Polkville to US 74 west of Shelby, 11 miles.
Alexander	NC 90	Widen existing pavement to a 24' width between Taylorsville to NC 127, 4.7 miles.
Gaston	NC 274	Widen existing pavement to a 24' width from SR 2446 to a point 2.1 miles from the South Carolina Line, total of 5.1 miles.
Catawba	NC 127	Widen existing pavement to 24' width from NC 10 to Brookford, 6 miles.
Burke	US 70	Resurfacing the approaches to the new overhead bridge near Drexel, 0.5 mile.
Burke	NC 114	Resurfacing from US 70 0.2 mile towards Drexel.
McDowell	US 70	Resurfacing the approaches to new overhead bridge on US 70, 3.2 miles east of Marion, 0.5 miles.
Buncombe	US 74	Resurfacing from NC 81 to Henderson County Line, 12.2 miles.
McDowell	US 70	Resurfacing from the beginning of the four lane section near Old Fort to a point 0.5 mile east of Buncombe County Line, 4.3 miles.
Madison	US 25-70	Resurfacing the Marshall Bypass, 4.5 miles.
Buncombe	NC 112	Widen existing pavement to a 22' width and resurface from NC 191 to Sand Hill Road, 2 miles.
McDowell	NC 226	Widen existing pavement to a 22' width and resurface section from US 221 to new project 8842, 10.7 miles.
Rutherford	US 64	Widen existing width of pavement to 22' width and resurface from Ruth to the McDowell County Line, 13 miles.
Henderson	US 25	Resurfacing and strengthening US 25 from the Buncombe County Line south to the junction of NC 191 in Hendersonville, 9.6 miles.
Jackson	US 19	Resurfacing from the Swain County Line to the Haywood County Line in Soco Gap, 4.05 miles.
Swain	US 19	Resurfacing from Tuckaseigee River Bridge to Main Street in Bryson City.
Swain	US 441	Resurfacing from the Jackson - Swain County Line to the Junction of US 19, 0.7 miles.
Haywood	US 19A & US 23	Resurfacing from US 19 to the Waynesville City Limits.
Transylvania	US 64	Replace existing creosoted timber bridge crossing the former location of the Southern Railroad and replace with an earth fill.
Henderson	NC 191	Replace structure over McDowell Creek in order to provide a higher capacity structure for this highway.

New Attorneys

Two attorneys have recently been appointed to the Attorney General's staff, assigned to the Highway Department.

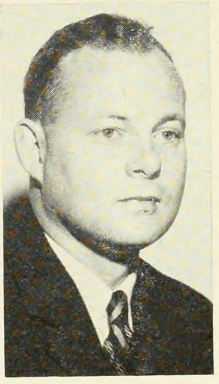


McDaniel

Andrew H. McDaniel joined the Highway legal staff earlier this year as a trial attorney. A native of Forest City, he attended the University of North Carolina, where he received the B. S. degree in business administration in 1951, and the LLB degree in 1957.

Following his graduation from law school, he served as research assistant for Supreme Court Justice R. Hunt Parker. Prior to joining the Highway Department, he was associated in private law practice with the firm of Holding, Harris, Poe and Cheshire.

McDaniel is single and makes his home at 2406 Wade Avenue, Raleigh.



Lackey

Another addition to the legal staff was made this past month when Norris D. Lackey, Jr., joined the Department.

A native of Shelby, Lackey received his education at the University of North Carolina, where he received his law degree in 1957. While at the University, he was named most valuable player on the 1953 football squad and that same year, was named a member of the All-State football team. While attending law school there, he served as an assistant coach under the late Jim Tatum. He won the US Law Week Award for most scholastic improvement during his final year of law school.

After receiving his law degree, Lackey entered the Army, where he served as a First Lieutenant in the Judge Advocate General's Corps, stationed in Kentucky. He was released from active duty in September.

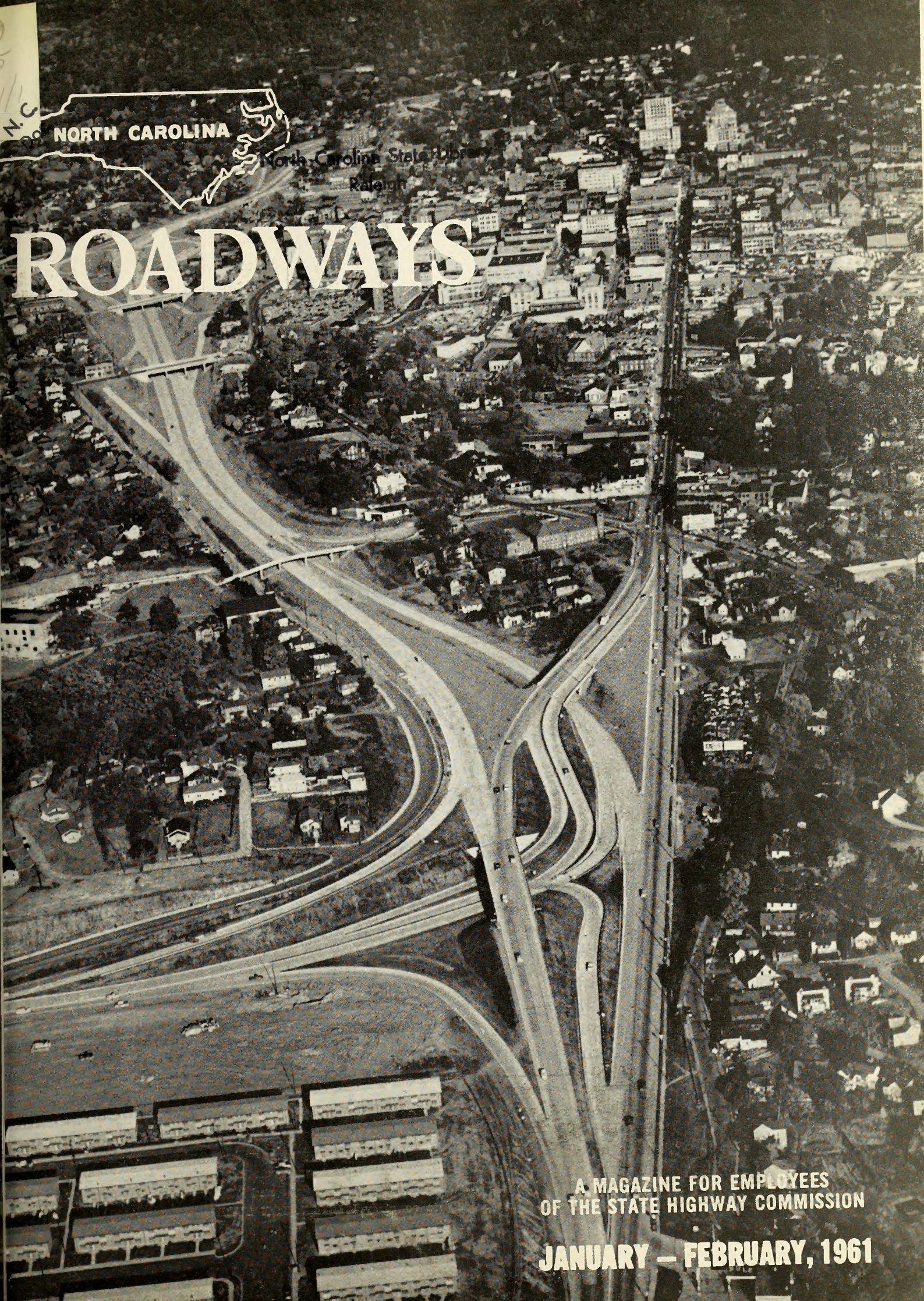
Lackey is married and the father of two children. The Lackeys reside in Chapel Hill.



One of the newly-opened sections of the Interstate System in North Carolina is this portion of I-95 between Eastover and the Harnett County line. Last month, traffic was placed on 33 miles of new Interstate highways in the State, including this 14.5-mile section of I-95, across Cumberland County. For a complete story on these routes now open to traffic, see page 8. (Photo by Bill Shaw, THE FAYETTEVILLE OBSERVER).

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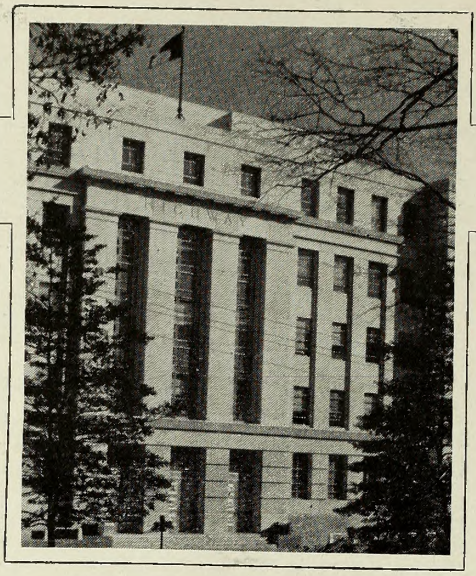
JANUARY – FEBRUARY, 1961

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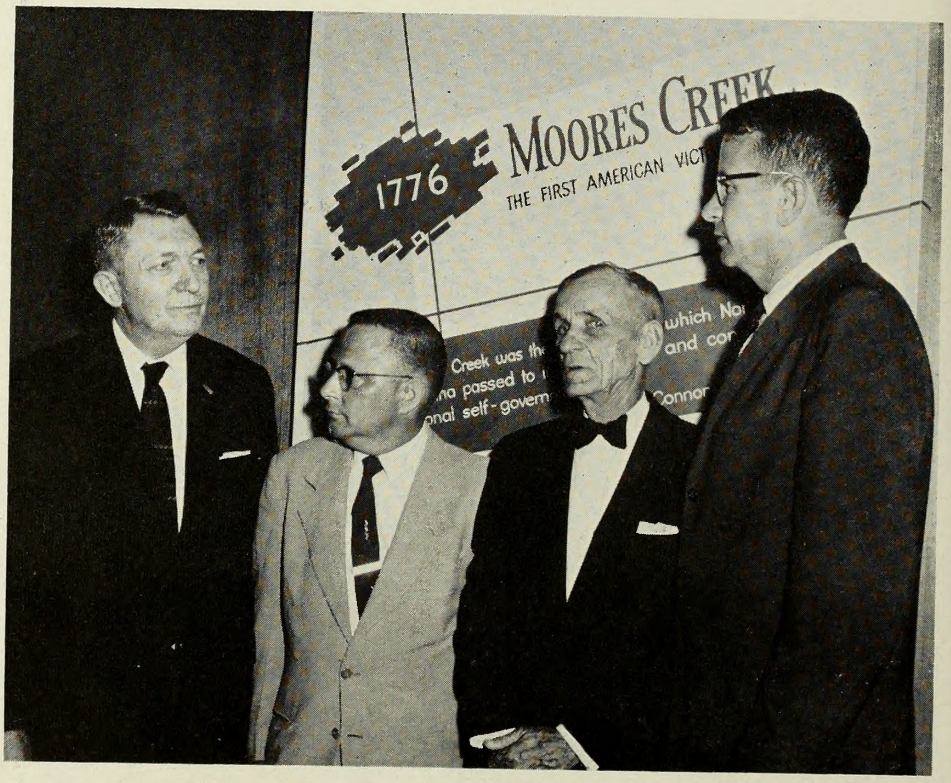
January-February
SAM BEARD.....Editor
JEANNE HAWTHORNE.....Assoc. Editor

May You Have - In 1961

Enough happiness to keep you sweet
Enough trials to keep you strong
Enough sorrow to keep you human
Enough hope to keep you happy
Enough failure to keep you humble
Enough success to keep you eager
Enough friends to give you comfort
Enough wealth to meet your needs
Enough enthusiasm to look forward
Enough faith to banish depression
Enough determination to make each day a better day than yesterday.

The Cover

The cover is an aerial photograph looking east on the $6,000,000 Asheville Expressway from a point near the Smoky Mountain Bridge over the French Broad River. The expressway through the heart of the mountain city was opened to traffic in mid-December. It has nine bridges, eight for vehicles and one for pedestrians. Photo courtesy THE ASHEVILLE CITIZEN.



At a recent meeting of the Moores Creek Battleground Association, Highway Chairman J. Melville Broughton, Jr., dedicated portions of NC 210 and US 421 as the Moores Creek Battleground Highway. Shown in the picture are, left to right: Vivian Whitfield, president of the Moores Creek Battleground Association; Highway Director W. F. Babcock; D. N. Lucas and Highway Chairman J. Melville Broughton, Jr. (Photo courtesy WILMINGTON STAR)

Past Year Went By Like '60

Road-building projects totalling more than $59,000,000 were completed in North Carolina during 1960, while at one time during the year, projects totalling more than $120,000,000 were active.

Maintaining its position of national leadership in construction work on the 40,000-mile Interstate System, North Carolina had opened 148 miles of the new four-laned, superhighways to traffic by the end of the year, and another 52.3 miles was nearing completion and being readied for opening during midsummer.

The largest section of Interstate highways opened to traffic during 1960 was the 51.7 mile link between Kenly and Eastover. Following close behind was the I-85 portion, entering the State at Henderson, and running south and westward, bisecting the Piedmont Crescent. Urban portions of I-40, through Winston-Salem and westward to the Yadkin River, were brought up to the high engineering standards of the Interstate System.

Additional lanes of US 70, between Efland and Greensboro, were placed under traffic for the first time in mid-December. In addition to the 33.5 miles already open, an 18-mile section from Efland to Durham has been paved and only shoulder and touch-up work needs to be done before this link will be placed under traffic in the spring or summer. Still carrying the US 70 designation, this is an eventual part of the I-85 route, and will carry the red, white and blue Interstate signs as soon as all specifications can be met.

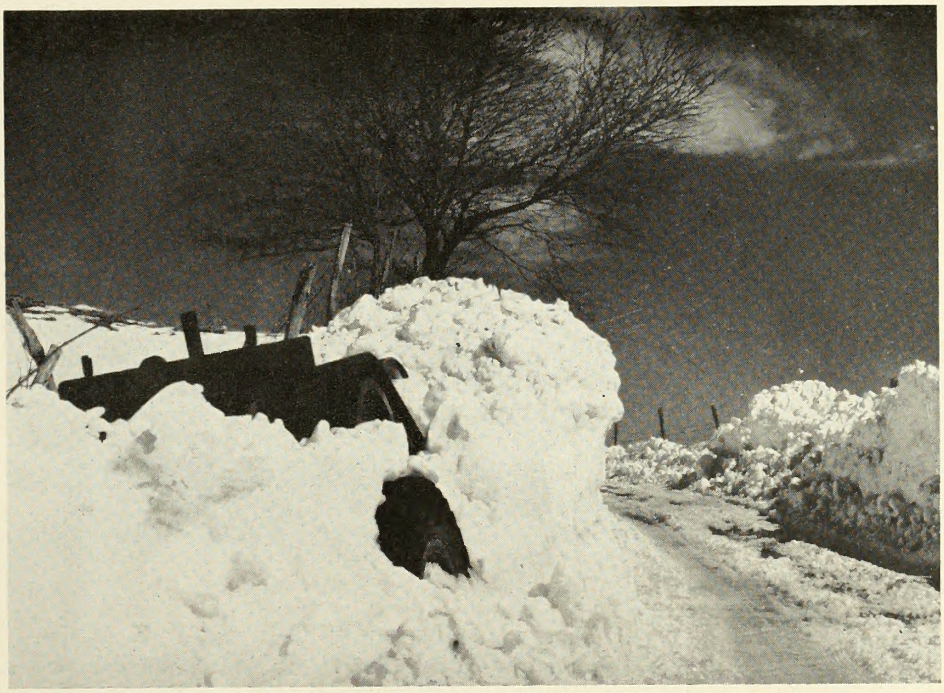
Heavy congestion on US 70 in the western portion of the State is expected to be cut down considerably in the spring of 1961, with the opening of a 34.5 mile section of I-40 through Burke and McDowell Counties from Hildebran to Marion. Paving has been started on the 10-mile portion connecting Marion with the Old Fort to Ridgecrest Road, which has cut many minutes off mountain driving to and from Asheville.

Primary Projects

There were many Primary and Secondary road projects completed or underway during 1960 as well.



This 18-mile section of Interstate 85, located between Henderson and the Virginia State line, is typical of the many Interstate projects which were underway during 1960. Before the year's end, this portion of I-85 was under traffic and relieving much of the load from heavily-traveled US 1.



One of our major problems during 1960 was the late snowfall which literally buried many western North Carolina roads, like the one above.

In the east, the Alligator River Bridge was coming along according to the schedule which would see it opened in time for the 1962 summer tourist season. When completed, the big bridge will eliminate ferry service across the Alligator River, connecting Tyrrell and Dare Counties, and provide the missing link in the coast-to-coast US 64. Grading on the new controlled-access US 64 expressway between Nashville and Rocky Mount was nearing completion as the year came to a close, and preliminary planning on a new link of the route from Raleigh to Wendell was pushed.

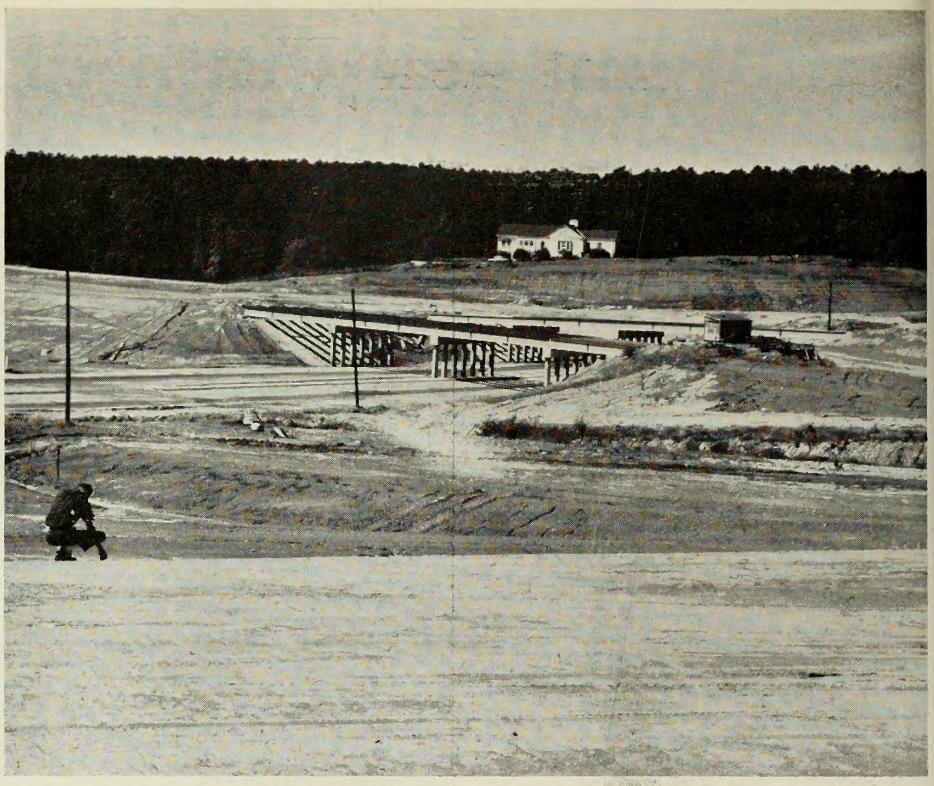
Survey work was begun on the Oregon Inlet Bridge, which will provide continuous road service into and out of the National Seashore Park, now under development. With the completion of the Oregon Inlet and Alligator River bridges, all ferry service in the northeastern section of the State will be eliminated. Another convenience for outer banks motorists was the 50-mile resurfacing project along the entire length of Hatteras Island.

Carteret County came in for its share of highway work, with the new North River Bridge on US 70 and completion of plans for a span across the Newport River, connecting Morehead City and Beaufort. Another improvement was the planned four laning of the US 70 approaches to Morehead from the west, and four-laning on US 70 south of Havelock.

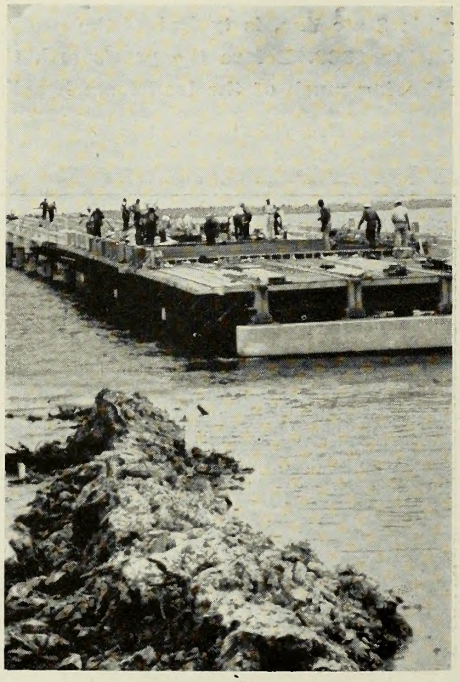
With three proposals for a crossing of the Cape Fear River into Wilmington, the year ended with studies still underway into the alternate proposals. Nearing completion, however, were the plans for a new bridge and approaches from Wilmington to Carolina Beach, with this project scheduled to be let during 1961.

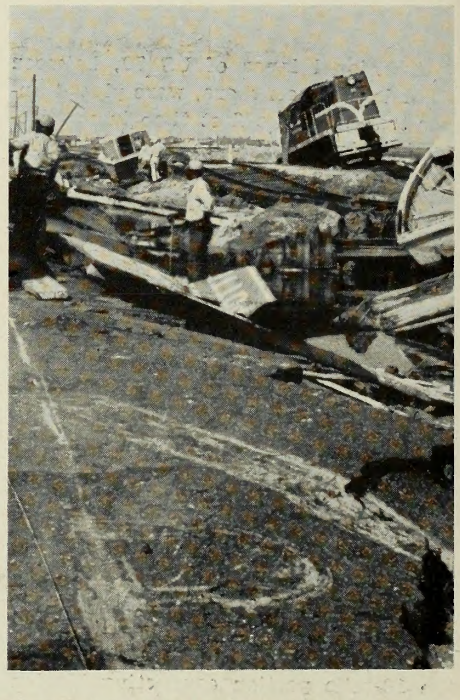
Major Primary projects in the eastern Piedmont included a new section of US 401 north of Lillington, with an additional two-lane bridge over the Cape Fear River, a US 1 Moncure bypass; four-laning of US 1 north of Raleigh and the Raleigh Belt Line. Contract work was underway on two additional lanes of US 74, between Rockingham and Hamlet, and the Laurinburg and Lumberton bypasses were in the drafting stages.

The Asheboro Bypass on US 220 was ready for right-of-way acquisition and Greensboro's Aycock Street improvement was scheduled for early 1961 letting. The Interstate 40 expressway in Winston-Salem was placed under traffic, becoming the first completely controlled access freeway in any North Carolina



Work was begun also on the first section of the Raleigh Beltline, shown above. The first section now under grading and structure contract lies between Western Boulevard near State College and US 70. (Raleigh-Durham Highway) near Crabtree Creek. The second project, carrying the route from US 70 to US 1 is slated for letting in 1961.





As workmen began the task of spanning the murky Alligator River with a bridge, left, a tropical storm named Donna swirled up the Atlantic Coast, leaving many bridges and roads inundated. The photo at the right shows workmen clearing up parts of the debris on US 70 when the Morehead-Beaufort Causeway, was badly undermined from Donna's heavy rains and winds. An engine of the Beaufort-Morehead Railroad, whose tracks were destroyed by the storm, is shown in the background.

city and the Cherry-Marshall Street project, as well as four-laning of US 52 from the twin cities north to Pilot Mountain, were underway.

Grading was completed and paving work awaited the arrival of spring on the new US 421 between Vilas and the Tennessee State line. Another expressway, through the heart of Asheville, was opened to traffic late in the year.

The construction of climbing lanes on the Saluda Mountain portion of US 176 was put to contract, and bypasses for Waynesville and Clyde were in a stage of plan completion, ready for acquisition of right of way.

In all, there were 191 construction jobs of major size and importance underway or completed during the year. On the Secondary System, paving was completed on 605 miles of rural roads, while an additional 425 miles were stabilized and 170 miles were improved by heavy maintenance. Scores of Secondary Road bridges were brought up to minimum service requirements.

Damage Heavy

Damage to roads was heavy also during 1960, beginning in late winter, when as much as 91 inches of snow was dumped on Watauga, Avery, Alleghany and Ashe Counties, covering some roads in drifts as high as 40 feet.

It was an around-the-clock job to clear the roads, but highway employees were moved in from as far away as Wilmington and Fayetteville, and every available piece of snow removal equipment was pressed into action, including more than 200 pieces rented from private contractors. Estimates for removing the snow were placed at $500,000, while permanent damage to road beds and pavements was set at several millions of dollars.

As summer changed to autumn, Hurricane Donna whirled up the Atlantic Coast, ripping up highways and bridges and burying many highways in sand. Total road damage from this tropical storm was placed at around a half million dollars.

Funds Short

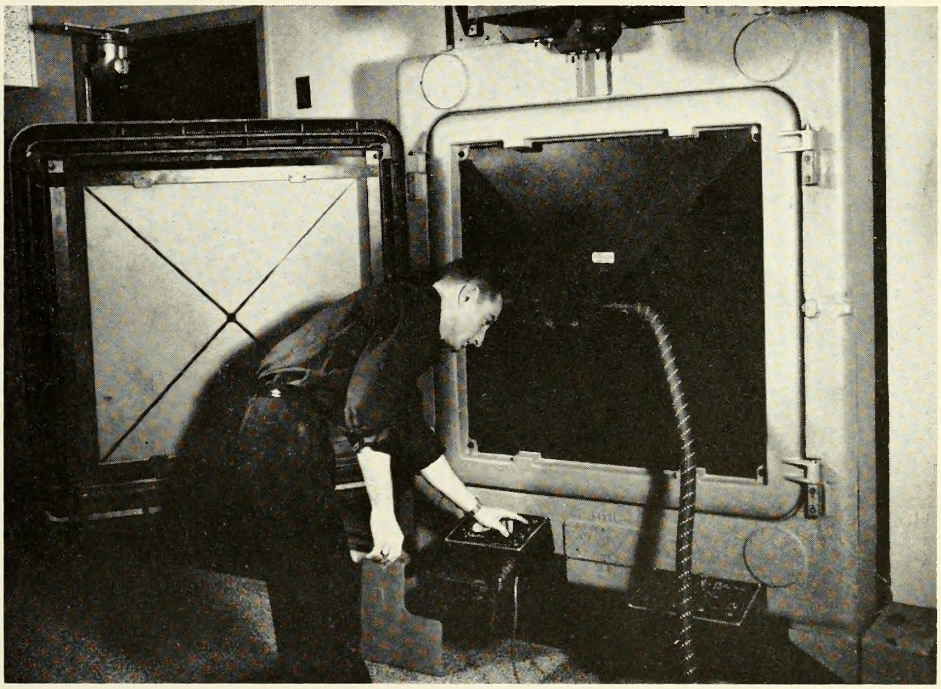
Demands for better highways continued to increase, while State and Federal funds for road improvements decreased. Bad weather, and the effect of the compact car were blamed for the reduction of gasoline sale tax revenues below legislative estimates.

Meanwhile, a report on highway needs during the next 15 year period showed

(Continued on page 5)



Here is a view of some of the crowd which turned out for the Wilmington bridge hearing in the fall of 1960. Many thousands of persons watched the proceedings at home, as WECT-TV brought their television cameras on the scene and telecast the hearing live for some six hours. This was the first time in the State's history that such a hearing had been telecast in its entirety.



While much progress in the road-building field could be seen in the form of new roads and bridges being built, steps were taken to provide the most modern tools with which to get the work done. One of these was the opening of the ultra-modern Photogrammetry Section. Here an employee inspects the giant Copy Camera, one of many pieces of up-to-date equipment which has been installed.

43 Reasons Why We Need Better Highways

Strangulation of our national economy by a gigantic nationwide traffic jam, and the crippling of our defense effort through failure to keep the Federal Highway Program going, would be more costly than any of us can afford.

Most American citizens don't know why we need good roads. They are apathetic. Because they do not understand, there is little public support for a well-planned, nationwide system of Interstate, State and rural roads.

Here are 43 of the hundreds of reasons why we must have better highways now.

GOOD ROADS SAVE MONEY

1. Total annual avoidable waste over all roads in the U. S. amounts to $3 billion. Interstate Highways would save $550,000,000 in gas consumption, brake and tire wear, vehicle operation—save $725,000,000 now wasted on traffic accidents—save $825,000,000 in time lost by commercial vehicles.

2. Modern Interstate Highway engineering eliminates steep grades, sharp curves, intersections at grade, stop and go driving. Good highways can bring about annual savings of $750,000,000 in direct operating costs of trucks and buses.

3. Payments of insurance covering property damage and personal injuries resulting from highway accidents equal 12½¢ per gallon of gas consumed. That equals $116 for every motor vehicle registered.

4. It costs less right now to build a typical mile of Federal Aid Highway than it did during the first three months that the 1956 Highway Act was in effect.

GOOD ROADS SAVE LIVES

5. In 1920, the traffic death rate per 100 million miles was 28.2. In 1950, the death rate was 11.4. Then we started building better, safer roads. Bertram D. Tallamy, federal highway administrator, recently predicted that the death rate will decline from the 5.6 per 100 million miles in 1958 to 5.0 in 1970 and 4.4 in 1975.

6. The controlled access highway is at least 2½ times safer than the ordinary highway. On Virginia's Shirley Highway, with controlled access, the fatality rate is 0.8 deaths per 100 million miles. On the parallel US 1, with no control of access, the death rate is 10.6.

7. Traffic accidents today are killing 38,000 people annually. Experts estimate that highways engineered for safety would save 4000 lives per year. By 1970, continued use of the Interstate System could save 37,800 people.

8. If traffic volume increases by 50% in the next ten years, there will be 55,000 fatalities a year—unless safer roads cut the rate.

9. In Chicago, the chance of having an auto accident on congested streets is 30 to 50 times greater than on the new Congress Street Expressway.

10. In 1959, accidents cost $4.3 billion. Modern highways can eliminate a very large part of the monetary waste of accidents.

GOOD ROADS FOSTER ECONOMIC GROWTH

11. Modern highways are a sound, durable investment in the growth of the Nation.

12. The dollar value of goods and services for a specific period is called the Gross National Product. $1 billion of highway construction contributes to the Gross National Product as follows: Steel, 510,000 tons; bituminous materials, 995,000 tons; cement, 16,000,000 barrels; explosives, 18,345,000 lbs.; aggregates, 76,415,000 tons; petroleum products, 122,794,000 gallons; construction equipment, 34,584 pieces; trucks and cars, 22,500 pieces. These are based on each $1 billion in excess of an annual rate of $5.8 billion of construction.

13. The New York Thru-Way is officially credited with stimulating 650 million dollars worth of industrial, commercial and residential development, including $50 million around Tarrytown alone.

14. With the New Jersey Garden State Parkway, the gain in taxables and retail business in the counties it serves is twice that of New Jersey's remaining 11 counties.

15. On Route 128 near Boston, some 227 companies have built 17 industrial parks and 175 million dollars worth of buildings to house upwards of 28,000 people — workers with good wages to spend.

GOOD ROADS ARE ESSENTIAL FOR NATIONAL DEFENSE

16. In case of war, all sections of the country must be swiftly available for the defense effort.

17. Highways are relatively invulnerable to atomic attack. It would take 20,000 Hiroshima-type bombs to destroy the 40,000 miles of the projected Interstate System.

18. We need good highways to evacuate people from our cities; bring in food; bring in medical supplies and help; move large volumes of military vehicles and weapons.

19. Highways are extensions of production lines; defense production depends on them. During World War II, 8 out of every 10 parts needed to make a tank in Cleveland came by truck from 23 states. 75% of the workers in 749 defense plants drove to work in their automobiles. 60% of all out-bound tonnages from defense plants were road-borne.

20. A network of good highways will assure nation-wide mobility for all our defense resources.

GOOD ROADS BENEFIT LABOR

21. The American working man drives his own car to his job. He can offer his services throughout a greater area; he has a greater diversification of jobs to choose from.

22. With good highways, the laboring man can think in terms of minutes rather than miles of driving to and from his job.

GOOD ROADS BENEFIT FARMERS

23. American farmers operate over 6,406,000 motor vehicles (including 3 million trucks.) 89% of all farm products now reach their markets by highways.

24. Better rural roads bring markets and sources of farm supplies closer together, make schools more accessible to farm homes, make medical services readily accessible.

GOOD ROADS INCREASE BUSINESS

25. One out of every six businesses (mostly small, independent firms) serve the Transportation industry. Good roads are a shot in the arm to the small businessman.

26. Of the people who do the buying, 60% own automobiles. American consumers spend $38 billion per year to own and operate their cars, helping to support garages, service stations, manufacturers of automotive parts and accessories, etc.

27. 60% of American buyers purchase goods that are transported via highways, streets and alleys. Fast deliveries increase business.

28. 70 million Americans take vacations by car each year (over 75% of tourist travel is by car), averaging 1013 miles per round trip. Many others travel by bus. Altogether they spend $9.2 billion on vacations. This is big business for motels, resorts, restaurants, and souvenir shops to name a few!

29. The annual bill for recreation travel is $14 billion. 22% of this is automobile expense. Big business for the automotive industry!

GOOD ROADS FURTHER FULL EMPLOYMENT

30. One out of every seven American jobs is in the field of Highway Transportation.

31. Truckers provide over 5,750,000 jobs. Highway transportation industries provide 9.7 million jobs. Employed is a labor force equal to the population of all New England states, Arizona, Colorado, Montana, New Mexico, Wyoming.

32. Each $1 billion spent on highway construction equals 102 million man-hours of employment on the site of construction and 126 million man-hours off the site—a total of 228 million man-hours of labor.

33. In 1958, an extra $400 million in highway contracts, let as an anti-recession measure, provided 137 million man-hours of employment and broke the back of the recession.

GOOD ROADS BENEFIT ALL INDUSTRY

34. For the trucking and motor carrier industry alone, Interstate type highways provide these advantages:—reduction in number of power units required; use of lighter tractors; increased tire life; reduction in fuel and maintenance costs; reduction of accidents and insurance premiums; year 'round maintenance of on-time schedules for livestock and perishable goods.

35. The private consulting engineer profession carries 40% of the engineering load of the new Interstate System.

36. Utilities are free from the burden of acquiring easements of private land because so many consumers are located on good highways. In Oregon, a utility study shows savings of about $100 a mile on 3212 miles of public right-of-way, mostly passed on to consumers.

37. Practically every industry is stimulated by increasing motor vehicle registrations. In 1959, registrations totaled 70,416,000 (3.1% more than in 1958). In 1971, it is estimated that 101,200,000 motor vehicles will travel over a trillion miles annually (20.7% on the Interstate System). In 1976—114 million motor vehicles will travel 1.2 trillion miles a year.

38. By 1976, 230 million people will need industrial goods and services fostered by increased travel on highways, rural roads and city streets.

GOOD ROADS BENEFIT EVERY CITIZEN

39. 8 million children ride buses to school every day of the school year. They need safe all-weather roads.

40. Movement of goods and people is faster on modern highways.

41. Time saved means lower transportation costs and lower prices for truck-borne merchandise.

42. Annoying, dangerous traffic congestion is reduced.

43. Modern highways, engineered to last by the application of results of the AASHO test road research at Ottawa, are the cheapest investment a private citizen can make to insure his life, his security, his country's growth, and his children's future.

PAST YEAR

(Continued from page 3)

that two and one-half billion dollars will be needed to provide improvements on the Interstate, Primary and Secondary systems in our State.

Appearing before the Governor's Advisory Budget Commission, the Highway Commission made several suggestions with regard to providing the necessary funds for road improvements outlined in the 15-year plan. The Highway Commission asked that funds other than those derived from the Highway Fund be used to support the Prison Department, Utilities Commission, Probation and Paroles Commission. It was also suggested that gasoline inspection taxes, now being diverted to the General Fund, be used for highway purposes.

As another means of providing additional funds for road improvements, the Highway Commission proposed an additional ¼ cent per gallon gasoline tax, as well as a small increase in license fees for passenger vehicles. As the year drew to a close, no report was available on the Advisory Budget Commission's planned recommendations to the General Assembly.

Predictions for 1961 point to a slight increase in contract lettings, with as much as $70,000,000 of work going out. The year 1961 is expected to see more than one-third of the State's 775-mile Interstate program completed, and a number of urban projects begun in line with the cooperative municipal-state thoroughfare planning. The Secondary Road program is expected to continue to move forward in the new year, with approximately $18,000,000 available for paving and major stabilization work.

Highway Commission Going Into Toll Ferry Business In 1961

The State Highway Commission will go into the toll ferry business in 1961 following a December 28 decision of the roads body to re-establish ferry connections between the island of Ocracoke and a point on the mainland in Carteret County.

Action on the toll ferry came after notification from Governor Hodges that he was making available $375,000 from highway surplus for the purpose of purchasing or building a ferry boat and establishing "minimum ferry service" to the colorful outer banks island.

Details of setting up the service were left to Director Babcock and Chief Engineer C. W. Lee who were instructed by the Commission to prepare and present a plan for implementing the toll operation as soon as practicable.

The Highway Commission adopted a detailed policy outlining the type of ferry services which would be provided free and those which would be toll. Under the policy the Commission said, "whenever such ferry service is the only practical means of providing automotive transportation to isolated communities, it shall be the policy of the Highway Commission to provide reasonable and free ferry service within the framework of fund availability and with due consideration given to the maintenance and construction needs of the entire highway system."

This provision would insure that current ferry operations across Oregon and Hatteras Inlets would remain free. Ferries will be eliminated at the Alligator River, at Street's Ferry and Eaton's Ferry as soon as bridges now under contract or approved are completed.

In addition, the Commission policy states, "where major communities have access to the State Highway System by roads, bridges or ferries, but where a proposed ferry service might be in the public interest or an added convenience, it shall be the policy of the Commission to consider such ferry service on a toll basis only." Under the latter provisions the additional Ocracoke ferry service would fall in the toll-charge category.

The new ferry policy further states that, where tolls are charged, the fee will be sufficiently large to insure recovery of all maintenance, operating and depreciation costs.

A privately-operated toll-ferry service was inaugurated from Atlantic to Ocracoke last summer but was suddenly halted after Hurricane Donna tides closed available channels. Since early fall, the ferry boat, "Sealevel," owned and operated by the well-known Taylor brothers has been docked in Atlantic.

There was no indication in the Commission's December 28 action whether the Sealevel would be purchased as had been suggested earlier. A two member committee of the Highway Commission had recommended that the Taylor brothers be offered $275,000 for their boat and the docking facilities which they had constructed at both ends of the Atlantic-Ocracoke run. The question of what type of ferry boat might be used will await recommendations of Department officials and further Highway Commission action.

One suggestion which has drawn considerable favor has been the possible shortening of the total run by moving the mainland docking facilities from Atlantic to Cedar Island. This would cut considerable time off the three and three-quarter hours required by the "Sealevel" during the short period it was operated.

Madison Bypass Open To Traffic

The Madison-Mayodan bypass on US 220 is now open to traffic.

The 5.92 mile bypass was opened to traffic shortly before Christmas. There are three sections of dual lanes around interchanges and another section of US 220 bypassing Stoneville, is scheduled to be built in 1961.

Costs for grading, structures and paving on the Madison-Mayodan bypass was $1,950,000.

Four-Laned US 70 Placed Under Traffic

Motorists traveling between Durham and Greensboro on US 70 now have a total of 33.5 miles of four laned, divided highways on the 56-mile route.

The latest section of four-laning, which is more than 22 miles long, was opened to traffic in December.

The two east-bound lanes of US 70 eventually will be incorporated into the I-85 route, and will tie in with another four-lane section which is already open.

Total contract cost of the newly-opened section, not including right-of-way and engineering costs, was $5,159,278.

Although some shoulder work will be necessary in the spring, an agreement was reached between the Highway Department and the contractors to place the road under traffic early for the convenience of motorists. After both lanes of the divided highway are brought up to Interstate standards, the US 70 markers will come down and the route then will carry I-85 designations.

Secondary Road Projects Dropped By Commission

At a recent meeting in Fayetteville, the Highway Commission dropped more than 30 secondary road construction projects. The projects were deleted because right-of-way cannot be obtained from property owners along the roads.

The projects involve more than 40 miles of work on the vast 57,000-mile secondary road system. The projects are located in 17 counties, from Currituck in the northeast corner of the State, to Cherokee in the southwest tip of North Carolina.

The Commission expressed regret at the necessity of the action but a long-time policy requires property owners to donate right-of-way for secondary road improvement projects, except in cases where actual property damage occurs.

NC Highway Officials Address AASHO Sessions

Several officials of the North Carolina State Highway Commssion were among the speakers at the recent convention of the American Association of State Highway officials in Detroit, Michigan.

Speaking on the topic, "North Carolina Organizes for Urban Transportation Planning," Highway Director W. F. Babcock traced the establishment of the Advance Planning Department. Pointing out the work being done in North Carolina now, he noted that the Department has 50 thoroughfare plans in the process of development with cities at the present time.

Babcock expressed the belief that effective, practical and cooperative state-municipal planning" is a key to better urban transportation—that through it we may become 'accessories before the fact of need,' rather than 'accessories after the fact of hopelessly critical congestion."

Controller Ervin Dixon, in his talk before the AASHO Committee on Finance, said that the electronic computer is, to good administrative practices, the same as the bulldozer is to highway construction.

Dixon said new horizons for effective use of the computer can be found everywhere. He pointed out the usefulness of the computer in preparing payroll checks for 9,000 permanent and temporary employees, including automatic computation of retirement contributions, state and federal income tax deductions, insurance premiums, social security deductions and related reports.

In closing, Dixon told the highway officials that "though we may be proud of our profession and our proficiency in it, we cannot escape the fact that the electronic computer stands ready to eliminate many of our headaches and point our feet in the right direction if we will only give it a chance to function within our highway department as we know it can and as many of us firmly believe it should."

Public Relations Officer Sam Beard gave a talk before the AASHO Committee on Public Relations, on the role of the public hearing, pointing to the highway public hearing as "a most challenging and effective tool in the development of better roads and in better highway public relations."

He traced the steps necessary for a good public hearing, such as preparation of maps, presentation, and follow-up by members of the Planning Board. Beard told the highway officials that if a project is worthy of construction, it deserves every care in presentation. He said a public hearing must always be regarded as a "two-way street", a common meeting ground for ideas where the opinions of the public are just as important and frequently more important than the views of highway officials.

Assistant Chief Engineer Ivan Hardesty gave a report on plans to construct a civil defense fallout shelter in North Carolina. In cooperation with the Office of Civil Defense and Mobilization, which will bear the cost, the shelter would provide protection for 100 persons. The shelter will be complete with emergency power supply, air conditioning, 14-day food supply, bedding, medical supplies and some basic radiological monitoring instruments.

The site which has been selected for the shelter is located on I-85, approximately 3 miles from the South Carolina line.

Upon completion, the shelter will be used for several years by the Office of Civil Defense Mobilization, for the purpose of bringing the need of such shelter areas before the public eye. After this time, the shelter will be turned over to the Highway Department for its own use.

Traffic Engineer Robert Burch gave a subcommittee report on Interstate Sign Manual changes.

BABCOCK APPOINTED

Highway Director W. F. Babcock was named to the Executive Committee of the American Association of State Highway Officials at the gronp's recent convention in Detroit, Michigan.

Babcock was named to the committee following the expiration of his term of office as a regional vice president of the organization of State Highway officials, composed of highway officials from the 50 States.

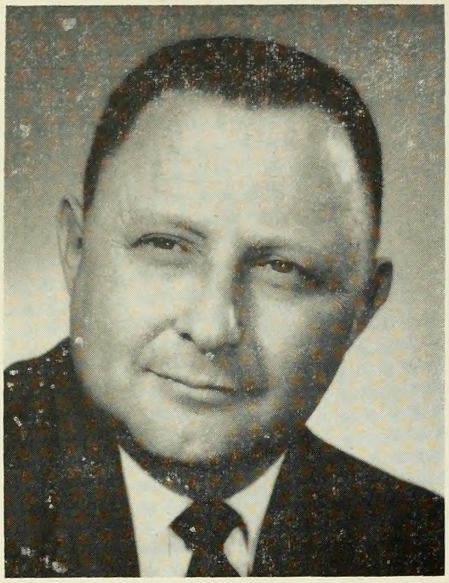
The AASHO Executive Committee is composed of eight permanent members, the past presidents and four regional vice presidents of AASHO.

Winston-Salem Officials Pass Resolution On New Expressway

With the opening of another section of Winston-Salem's East-West Expressway recently, the Board of Aldermen of that city passed a resolution of appreciation to the Highway Commission, its engineers and employees. A copy of the resolution follows:

"BE IT RESOLVED, that the Board of Aldermen of the City of Winston-Salem does hereby express to the State Highway Commission and to its engineers and other personnel whose work and efforts contributed to the successful planning and construction of the East-West Expressway, the sincere appreciation of this community for this important new traffic artery. The opening of the East end of this expressway, on Friday, November 18, 1960, marks the completion of the first controlled access expressway through the City of Winston-Salem; and represents a tremendous and progressive step toward the adequate handling and proper movement of the ever increasing flow of vehicular traffic to, from and through Winston-Salem."

The resolution was signed by Mayor Marshall C. Kurfees and Ralph L. Dixon, Secretary to the Board of Alderman.



From The Director's Office

Dear Fellow Employees:

Though you will be reading this well after the beginning of the New Year, it is never too late for us in the Raleigh office to extend to you our very best wishes for a succesful and happy new year!

There are many things which occurred in 1960 to trouble all of us. which we hope do not occur again in this year. We certainly do not need the tremendous build-up of snow on western roads which caused long hours of extra work under the most trying conditions imaginable. We also trust that any hurricanes which develop will pass us by far offshore and not leave the damage of Donna. However, whenever such natural disasters occur, I can tell you frankly that it is a matter of pride to all of us here the way all of you pitched in regardless of personal sacrifice involved, to get vital roads open and keep them open. The measure of an organization's strength is how it operates under the abnormal rather than normal condition. The work of highway employees in this regard has always been truly outstanding and your State and all of us who work for it in public service are deeply grateful.

In a letter sometime ago, I summarized some 13 steps which had been taken by the administration to improve working conditions and pay of employees. To my way of thinking, such efforts should be continued and increased. Whenever new and better techniques and procedures are available, they should be installed. Frequently, you may know about such an improved method and I urge you to pass helpful suggestions along to your supervisors or drop them in suggestion boxes which we are rapidly installing in the field. I have also been interested in the development of grievance procedures under which any employee who feels that he has been wronged may state his views, first to his immediate supervisor and then all the way up the line to the State Personnel Council. This procedure is important because an organization is no more efficient than the morale within and each of us has the responsibility not only for the people who work under us, but also for the people who supervise or direct our activities. No area is more difficult than the area of human relations and the best advice we can give is to recommend tolerance and understanding of the viewpoints of others. This is the golden rule of teamwork and teamwork has been and should remain a hallmark of our Highway Department's efforts.

Better public relations is your job and mine. As public servants, we have a duty to see to it that no citizen's question about road matters goes unanswered. He has a right to know the facts and it is our duty to see that he gets them. If you are unable to answer his question, you are furthering the cause for improved public relations when you make certain he is directed to the person who can provide the answers.

As in the past, the Highway administration will give every possible consideration to suggestions for improvements in working conditions and in remuneration. There are understandable limits beyond which we cannot go but you may rest assured that every effort will be made by all of us here to improve established procedures whereever such improvements are desirable and can be justified in the public interest.

Sincerely yours,

W. F. Babcock

W. F. BABCOCK

N. C. S. H. P. E. A. Association News

VOLUME 10—EDITION 1 JANUARY-FEBRUARY

THE STATE HIGHWAY COMMISSION approved on December 7th, renewal of our Group Insurance Contract with the Connecticut General Life Insurance Company for the policy year ending Sept. 30, 1961, in accordance with the recommendations of the Association and the unanimous action of the 1960 convention. We firmly believe this to be in the best interests of all at the present time. Your Insurance Committee plans quarterly meetings with the officials of the Company during this year in order to keep in closer touch with current experience. Also, it is planned to begin a State-wide educational program for all our employees on the benefits, costs, and experience involved in our Group Insurance Program. We want every employee to know definitely the many factors affecting the entire program.

INSURANCE EXPERIENCE for the year ending Sept. 30, 1960, is still entirely too high, with a total return to us in claims of 96.7% of every dollar paid the Company in premiums, whereas we are guaranteed a return of only 92.5%. The return this last year leaves the Company a retention of 3.3%, out of which must be paid gross premium taxes to the State of North Carolina in the amount of 2.5%, leaving the Company a net retention of 0.8% for operating expenses. We trust this figure will be reduced considerably during the current policy year, that we may be able to build up reserve and work toward future premium waivers, or we might be faced with another complete review of the present premium structure. Medical and hospital costs continue at a high level, and we are having more Accident and Sickness claims than normal, many of these for weekly benefits to those employees who are retiring and are having claims prior to their effective retirement date.

INTERESTING FIGURES on A & S claims, for the period from Oct. 1, 1959, to August 1, 1960, based on completed claims only and not including outstanding claims in that period:

	UNDER AGE 50	AGE 50-59	AGE 60-64	AGE 65 & OVER
Number of Claims	521	328	142	36
Amount of Claims in $	$71,900	$60,737	$28,246	$20,463
Average No. Weeks Paid	3.5	4.6	5.0	14.2
Average Claim Amount in $	$138.00	$185.00	$199.00	$568.00

EXPERIENCE FROM OCTOBER 1, 1959, TO SEPTEMBER 30, 1961, is as follows:

	LIFE ACTIVE	LIFE RETIRED	LIFE TOTAL	D&D	A&S	HOSPITAL	GRAND TOTAL COMBINED
Paid Premium	$374,510	$ 24,548	$399,058	$55,889	$237,378	$641,402	$1,333,728
Paid C'aims	294,500	137,000	431,500	25,000	256,083	576,555	1,289,138
Converts	932		932				932
Total Return	295,432	137,000	432,432	25,000	256,083	576,555	1,290,071
%	78.9	558.1	108.4	44.7	107.9	89.9	96.7

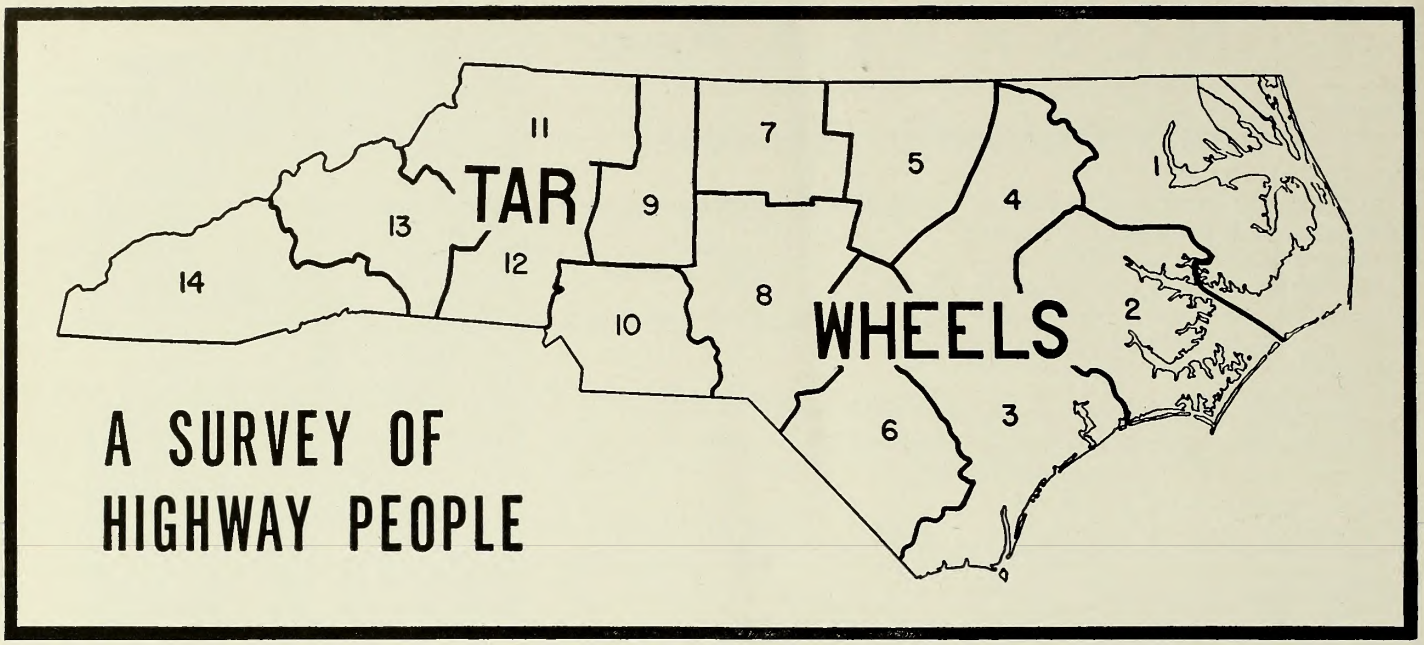
(Converts—those converting portions at retirement for regular life, charged to us at $65 per $1,000 insurance converted—this separate from regular retired life amounts)

THESE FIGURES SPEAK for themselves—you can easly see exactly what we paid in premiums, exactly what we received in return, exactly what is left. It can readily be seen that at this rate we can build no reserves, can expect no waivers, and will have to face the issue very soon as to a revision in our entire program unless experience improves drastically.

RETIRED EMPLOYEES at present are allowed to continue portions of their LIFE COVERAGE based on years of continuous coverage under the program, and this at the rate of $1.00 per $100 per month, the same rate charged active employees. Based on this retention figure, the records show that claims compared to premiums paid by retired employees showed a loss of $10,500 in 1955, $11,800 in 1956, $24,000 in 1957, $40,000 in 1958, $112,500 this year, this loss on this one group alone.

FIGURES QUOTED in this article are worthy of your very careful attention, your very careful study. Facts are facts, figures are figures. We have been very fortunate in having a very good and sound insurance group program over the years, and we certainly do not want to get beyond the realm of group costs, or else we will be in the field of regular insurance prices without regular insurance features. At the same time, we cannot expect any insurance company to pay us consistently more dollars than will allow them a reasonable operating expense, without their expecting some adjustments in benefits or in premium costs.

A CAREFUL STUDY is being continued by your insurance committee and officials of the company. We hope experience will improve greatly in the current policy year, and we sincerely hope that employees will not take advantage of the insurance program—it is for our use when it is needed, and if taken advantage of then everybody has to pay the price. All legitimate claims should be filed, and will be paid, but it is to be hoped that our employees will not just assume that the company "owes them something" because they have had the insurance for so many years. We buy and pay for PROTECTION from month to month, to be used when needed. Let us keep that in mind and maintain a good and sound insurance program at a reasonable cost to the employees. —Otis Banks, Secretary.



HEADQUARTERS

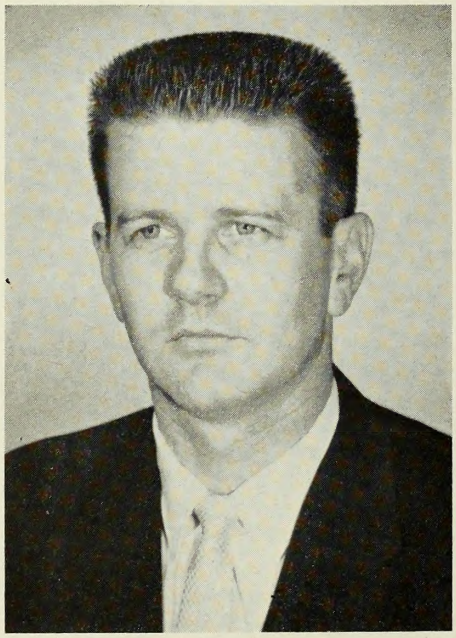
By JEWEL ADCOCK

LEGAL—Welcome to *Polly Starbuck, Marilyn Lee, Alda Doby, Dick Lackey* and *Edwin Preston*, new additions to the departmental staff. *Mr. and Mrs. Harrison Lewis* are the proud parents of a new baby boy. Our congratulations and best wishes to *Andy Jones*, Trail Attorney, upon his recent promotion to Assistant Attorney General. Andy assumed his new duties January 1 in the Attorney General's Office, with headquarters in the Justice Bldg.

EQUIPMENT—Employees in the department enjoyed an office Christmas party Dec. 22. Equipment superintendents came to Raleigh for a meeting Dec. 15, and enjoyed a Christmas party that night at the Carolina Hotel. Attending the party from the Raleigh office were *George A. Brinkley, J. W. Upton, R. G. Setzer, Bruce Poole, Jr.* and *John Lambeth.*

LANDSCAPE—*Jane Critcher* enjoyed a week's vacation at home during Christmas. *Kay Davis*, secretary to Mr. Brant, made a lovely "toothpick" Christmas tree to decorate the office.

PLANNING—*Wilson Wall*, Research Assistant, and *Malcolm B. Adams*, Draftsman II, are new employees in Mr. Bevacqua's office. And *Bruce Williams* of Raleigh is a new Research Assistant in Mr. Jay's office (Mapping Section) Best wishes to *Mrs. Shelby Womble*, who resigned Nov. 18 to accept another position. *Mrs. Barbara Thore* of Raleigh is her replacement. Welcome to *John Wellman*, new draftsman in the department from West Virginia and to *Larry Wallace*, draftsman, from Roanoke Rapids.



Marvin W. Cates of the Planning Department, was honored recently when he received the Raleigh Civitan Club's "Civitan of the Year" award, for distinguished service on club projects throughout the past year.

ADVANCE PLANNING — A lovely Christmas party was held by members of the staff Dec. 13 at the Dohun House. Congratulations to *Mr. and Mrs. William Riggs* upon the birth of a new baby girl, Linda Carol, Dec. 7.

PURCHASING — Welcome to *Mrs. Lucia Sloan*, new secretary to Mr. Ray. Our sympathy to *Olene Ennis* upon the recent death of her brother. *Leona Sidbury* enjoyed several days vacation recently entertaining relatives from Spain. The Tar Heel Club was the scene of a gay Christmas party for employees Dec. 21. Gifts were exchanged in the department the last work day before the holidays. Members of the staff were excited to hear that former secretary, *Christine Champion*, and her husband are the proud parents of a little baby girl, Angela Sherrod born Christmas Eve.

ROADWAY—It's nice to have *Polly Hildebrand* as new secretary to W. A. Wilson, Jr. Polly replaces *Judy Hansley* who resigned the first of December to join her husband in Germany. Design Engineer *Wilson* attended the AASHO meeting in Detroit, Michigan Nov. 27-Dec. 2. *Tommy Walkup* flew to Auburn, Alabama during the Thanksgiving holidays to attend the Alabama-Auburn football game. Congratulations to *David F. Arthurs*, who was married to the former Miss Sylvia Ann Readling of Mooresville, Nov. 27 at Broad Street Methodist Church. *Neill Salmon* resigned to complete his studies at N. C. State College. Members of Roadway Design report a splendid time at their Christmas party, Dec. 17, at Milburnie Club. Congratulations to *Mr. and Mrs. John Covington* upon the birth of their baby daughter, Janet Marie, Dec. 5.

BRIDGE—Proud new fathers of daughters are *G. D. Stone* and *R. W. Martin*. *Mr. and Mrs. G. G. Jenkins, Jr.* announce the birth of a son, Reid Keel Jenkins, born Oct. 7, 1960. *C. S. Hicks* is back at work after three months' duty with the Army. Welcome to *James Odell Morrison*, new employee in the Permit Dept., and *Nathan Brown Benson*, new trainee in the Drafting Room. *W. S. Winslow* attended the meeting of AASHO in Detroit, Michigan. Congratulations to *C. L. Goodwin's* son, Chip, star on City Champion midget football team; to *G. S. Marchant's* daughter, Mary Ann, who continues to make the Dean's list at Atlantic Christian College; and to *R. A. Shaw's* daughter, Kay, at Duke.

BRIDGE MAINTENANCE—Our deepest sympathy to *J. J. Powell*, whose brother died recently, and to *K. R. Scott*, whose mother passed away. Welcome to *Jimmy Lee*, who transferred from the training program to Bridge Maintenance. *Mr. and Mrs. J. J. Powell* visited their daughter and her family in Georgia recently.

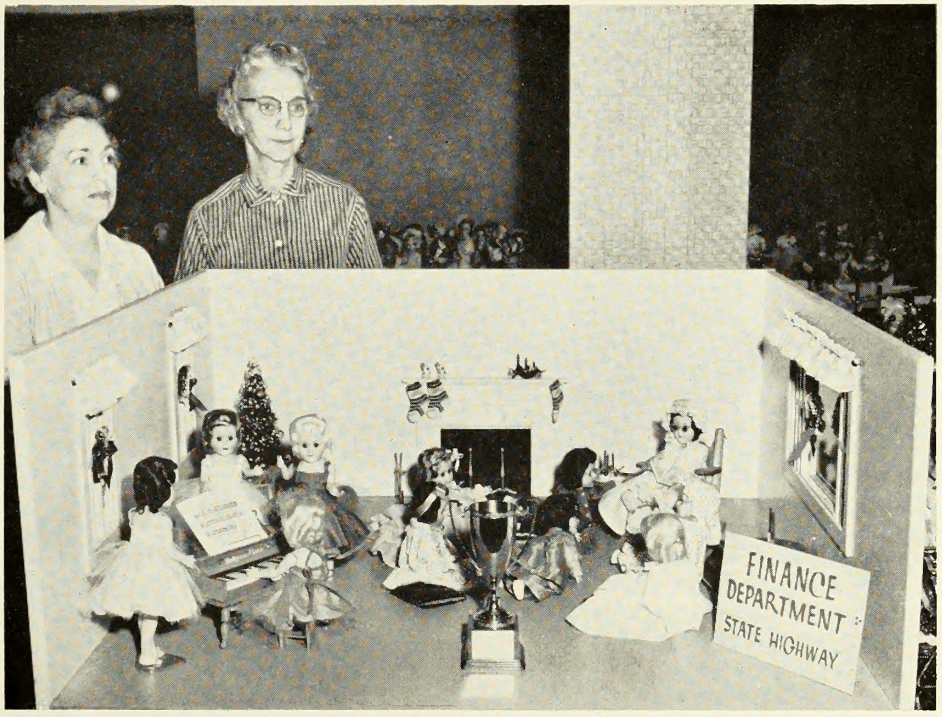
PHOTOGRAMMETRY—New faces in the department are: *Jimmy Crutchfield* from Pittsboro, *Pete Marchetti* who transferred from Planning, and *Mrs. Elise Speights* from Walterboro, S. C. Jimmy completed two years of study at State College and plans to return in the fall of 1961 for a degree in Engineering or Industrial Management. Pete completed three years at State in Civil Engineering and will return at a future date for his degree. Elise formerly held a position in the Advertising Department of Ivey-Taylor Company and has also done free-lance art work. Fellow employees welcome these fine additions to the staff.

CONSTRUCTION — *Barbara Williams* and *Mary Murphy* spent a weekend the middle of December with Mrs. Viola Paul in Rocky Mount and also motored to Richmond, Virginia to do some shopping.

PERSONNEL — Department employees enjoyed a fine Christmas party, Dec. 17, at Watt's Grill in Chapel Hill. Best wishes to *Barbara Ann Carlyle*, who was married Nov. 19 in Conway, S. C. to *Robert M. Springle* of Raleigh. The couple honeymooned at Myrtle Beach and Morehead City. Barbara is a steno in Personnel and Robert was a draftsman in Planning before joining the Air Force. He will be in service for four years and is currently stationed at San Antonio, Texas. Our heartfelt sympathy to *Mr. and Mrs. Lyman Melvin* upon the recent death of their little five-day old daughter, Anne Elizabeth. *Miss Betsy Shelton* had a grand time sight-seeing with friends in New York City during a recent weekend.

FINANCE—Employees report a wonderful time at their Christmas party, held Dec. 3 at the Angus Barn. The Department is proud to have won the second place trophy in the Doll Festival held by the Salvation Army. The dolls were on display at the Sir Walter Hotel. *Mary Turner* enjoyed having her sister from the Phillipine Islands home with her for Christmas. It's nice to have *Shirley Hicks* back at work, and welcome to *Jackie Tedder* and *Charles Baker*. Best wishes to *Mavis Hill*, who resigned to keep house. Sympathy is extended to *Barbara Edwards*, *Lou Coffield* and *Norman Pascall* in the loss of their loved ones. On Christmas Eve, *Betty Jean Wall* became the bride of Jack Preddy of Franklinton. The couple was married in the Rolesville Baptist Church.

LOCATION—It's nice to have *John W. Davis, III* join the staff as a Draftsman. John attended State College and plans to be married next spring. He spent the Christmas holidays in his home town, Fayetteville. Welcome to the following temporary employees: *H. D. Burnette, Jr.*, *R. J. Dedmon*, *P. R. Dozier, Jr.*, *Jim Duncan*, *G. P. Entwistle, II*, *B. B. Helms* and *D. E. Jones*. *Frances Smith* and her two children, Lockewood and Charlene, spent the Christmas holidays with her family in Rocky Mount. *Jo-Ann* and Wilbur Turner took their little son, Alan, to her family's home in Winston-Salem for the holidays. And the *Boyce Midgettes* went to the family home in Buxton for Christmas. The *Wayne Anderson's* are real proud of their 10-lb. baby girl, born Dec. 13. The following Highway Geologists enjoyed a duck hunt the weekend of Dec. 16: *Gerald L. Bunch*, *W. D. Bingham*, *F. C. Sechler*, *J. L. Hearne* and *A. C. Dodson*. Gerald is a native of Poplar Branch (near Currituck Sound) and he conducted the hunt. What about the ducks, boys? *Frank James*, Engineer of Property Surveys, drove to the West Coast for a family reunion with his two daughters and son, who are students at Colorado State University and Oklahoma State University. Recently the Commission plane was sent to Akron, Ohio for installation of de-icing equipment at the Goodrich Plant. Department Head *Lloyd Cook*, *Edgar Page* and *W. D. Hood* went along on the trip, and while the de-icing equipment was being installed, they paid a visit to the Divisions of Aerial Engineering of the Kentucky and Ohio Highway Departments. The visit proved to be both informative and interesting and of particular interest were the two states' methods of determining earthwork quantities by photogrammetry. Both Kentucky and Ohio use photogrammetry for cross sectioning and computing earthwork quantities quite extensively and are



In a recent Salvation Army contest for the best-dressed dolls, second place was awarded to this group submitted by employees in the Highway Department's Finance Section. Shown with the dolls are Mrs. Emily Sinsley and Miss Florine Boone, who supervised the entry.



Ronald Price, who worked in the Reproduction Section as an equipment operator, is currently on six months active duty with the Army National Guard, stationed at Fort Jackson, S. C.

leaders in this field. Cook states, "Our own modern and progressive Photogrammetric Department is preparing to move into this field and the type and amount of additional equipment required for this purpose is now being studied." *Carter Dodson* reports that pressure grouting operations for the stabilization of the Ridgecrest fill have attracted much interest and wide-spread attention in the engineering field and are progressing quite satisfactorily.

RIGHT OF WAY — *Vie Valentir* resigned to accept another position. Her replacement is *Celia Truelove* of Fuquay-Varina. *John Fields* has joined the department as R/W Aide I. *Owen Besselieu* was transferred to Wilmington for training as R/W Negotiator. *Cliff Carroll* and his wife spent two weeks in Bruton, Mobile and Montgomery, Alabama, visiting relatives. *W. H. Webb, Jr.* attended the AASHO meeting in Detroit, Michigan. Best wishes to *Barbara Moore*, who was married Nov. 27, at the Johnston Union Freewill Baptist Church in Smithfield, to Robert O'Neill Amick. They took a honeymoon trip to Nassau and are now at home, 2434 Wade Avenue. *Phil Carroll* and *Warner Powell* spent a portion of their Christmas holidays duck-hunting with Reece Shelley at Four Bridges, N. C. *Maxine White* and husband, Ronald went to her family's home in Enterprise, Alabama for the holidays. *Collis Lewis* and his wife visited her family in Bethel during Christmas. The *Jon Honaberriers* spent Christmas week in Titusville, Florida with her parents. To Trenton, New Jersey, went George and *Peggy Vollmar* to spend Christmas week and the New Year's holiday with his family. Congratulations to *Phillip Carroll*, Right of Way Aide who was married Nov. 24 in Leaksville to the former Alice P. Mitchell of that city. They are making their home at 3022 Farrior Road. *Ernie Ransdell* and his wife spent the Christmas holidays in Norfolk, Va., visiting with her family. The *John Fields* went to Wilmington for Christmas. Augusta, Georgia was the destination of *Mr.* and Mrs. *Hal English* and son for the holidays. *Trulah Page* spent Christmas with her sister in Williamston. The Angus Barn was the scene of the Department's gay Christmas party Dec. 16. About 60 fellow workers attended and all reported a delightful time with a grand program of entertainment, dancing and a delicious steak dinner. Recently when *Jack Batchelor* reported to work with a two-day growth of beard, it was rumored around the office that he was most certainly a pro-Castro sympathizer. However, opinions were changed when co-workers found out Jack's water pipes had frozen at his home in Yearganville.

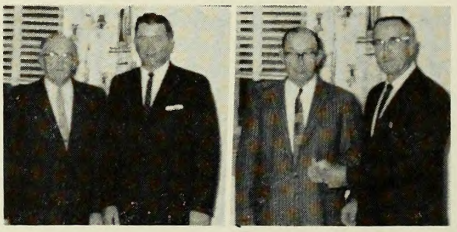
DIVISION ONE

By ROY E. WEST

Division Correspondent

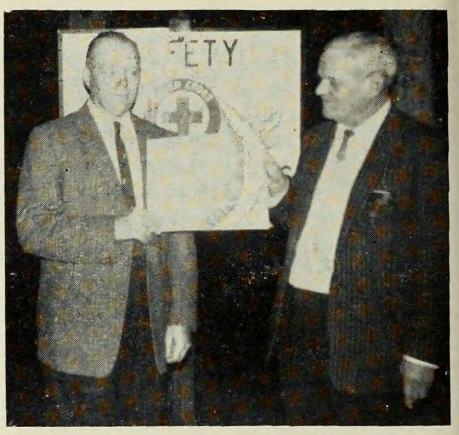
LADIES NIGHT was held in Hertford County recently, with turkey on the menu. An award for 35 years service was presented to *Dwight T. Baker*. Service pins were presented as follows: *Marvin T. Britton*, 30 years; *W. H. Coleman*, 25 years; *L. B. Austin* and *C. B. Mumford, Jr.*, 15 years and *A. L. Willoughby*, 5 years. Northampton and Martin County chapters also held supper meetings recently.

THE STORK REPORT shows Mr. and Mrs. *C. C. Matthews* are parents of a son, Charles Milton, born Oct. 18; the *James Modlins* are parents of a daughter and Mr. and Mrs. *J. E. Rhodes* are the parents of a son, Timothy.



Left photo shows L. B. Austin and C. B. Mumford, Jr., who were presented 15-year service emblems at the recent Hertford County Ladies Night. Assistant Division Engineer E. H. Baggs presents a 25-year service pin to Resident Engineer W. H. Coleman of Division 1, in the photo at the right.

ON THE ROAD to recovery is *W. M. "Coonie" Smith*, recuperating at his home following surgery. We are also glad to hear that *F. T. Combs* has returned to work after being out sick for five months. *W. H. Moseley* is back at work after being hospitalized. A speedy recovery is wished for *Herman Arnold, Sr., L. G. Perry, John Shannon* and *G. R. Green*, as we welcome *Carlton Edwards, H. S. Phelps, L. D. Cherry* and *G. A. Gibbs* back to work after illness.



Maintenance Foreman Hurley Clement Hoffler was honored recently for 35 years of highway service. He joined the Department in 1925 as a section foreman helper in Gates County and at the present time is working under P. L. Jackson, Maintenance Supervisor and District Engineer George K. Mack, right, who is shown presenting the service certificate. He and his wife, the former Lillian White of Perquimans County, make their home in Hertford. They have one daughter, Mrs. Donald Holman of Utah.

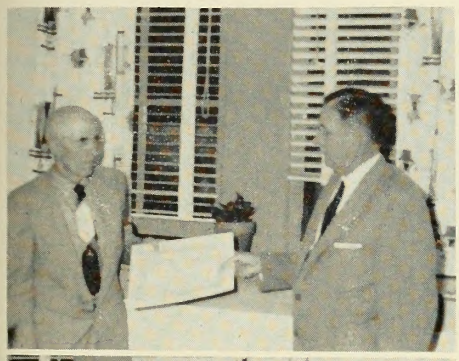
THE HOLIDAYS were occasions for many trips and visits. *T. C. Liverman* visited his uncle and aunt, the Rev. and Mrs. H. B. Hines of Sanford, to join in the celebration of their golden wedding anniversary. The *R. L. Vinsons* visited their son-in-law and daughter in Hampton, Va., and vacationed in Delaware. The *Mark Lawrences* vacationed in Georgia and *J. F. Wilson* spent a few days in New York. Recent visitors in Goldsboro were the *Obie Willifords* and son Jimmie. *P. L. Jackson* visited relatives in western North Carolina; *R. C. Speight* visited his brother and sister in Lumberton and the *E. M. Snows* report a nice holiday in Asheboro with relatives. The *T. C. Livermans* enjoyed the recent visit of their daughter, Mrs. Russell Batchelor, and her son, Jimbo.

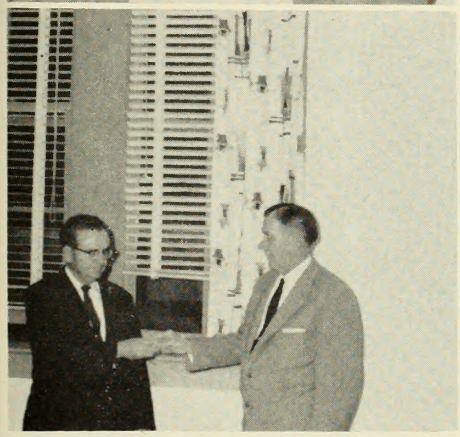
DUCK HUNTING was good this season, according to *Ernest Walker* of Currituck County. *Ruppert Hasty* says his hunting party bagged three deer recently.

SERVICE AWARDS were presented to *J. K. Spruill, R. S. Stratton* and *H. C. Hoffler* for 35 years of service. Service pins were presented to the following: *M. W. Godwin* and *E. A. Leggett*, 30 years; *A. N. Thompson*, 25 years; *C. E. Cameron*, 20 years; *Lofton Dail, Delmar Williams, J. P. Vincent, S. O. Cooke, W. W. Harris* and *F. L. Gray*, 15 years; *D. C. Cobb, Earl Shewbart, R. E. Byrd, J. R. Duke* and *S. T. Ricks*, 10 years; *Ivey H. Evans, F. B. Gaskins, Vetter Williams, R. E. Barrett, A. S. Edwards, R. L. Pritchard, H. L. Smith, E. B. Spence* and *Hansel Ray*, 5 years.

SYMPATHY is extended to Maintenance Foreman *G. M. Blake* in the death of his father.

(Note: A word of thanks to Elwood Copeland, for his fine work in gathering the Division One news these past several years, and congratulations to Roy West, our new correspondent, who did such a good job on this, his first report.)





District Engineer T. C. Liverman, right, presents a 35-year service certificate to Dwight T. Baker, in the picture at the top. Bottom photo, Liverman presents a 30-year service pin to Marvin T. Britton. Both Britton and Baker work in the Maintenance Department of Division One.



Retired personnel from Division Two attended a barbecue dinner recently at the Kinston Maintenance Garage. Left to right: Mrs. W. R. Cross, Mr. and Mrs. W. A. Parker, Sr., Mr. and Mrs. J. L. Phillips and Mr. and Mrs. Reuben King. Approximately 80 guests attended. Lenoir County employees presented Parker with a lawn mower.

DIVISION TWO

By ROY D. FRANKS

Division Correspondent

THE WELCOME MAT is all rolled out for Right of Way Aide *Sam Pollard*, and for *C. F. Antwine*, who is back at work in the Landscape Department after six months military leave, which took him to Fort Jackson, S. C., and Fort Leonard Wood, Mo.

VACATIONERS include *J. H. Burruss*, who took a recent duck hunting trip to the Outer Banks; *A. J. Williams* and family, who toured Florida; the *M. E. Newmans*, who spent the Christmas holidays in Missouri visiting friends and relatives; and the *J. T. Hinnants*, who visited relatives in Saginaw, Michigan and New York. Others spending leisure time from work were: *H. L. Briley, V. R. Barnette, L. W. Rowe* and *Fred L. Joyner. E. T. Bender and J. Q. Adams* tried their luck several times this season at fishing and deer hunting. The fishing trip report was all wet—they forgot the plug and the boat filled up with water.

OUR SYMPATHY is extended to Miss Anne Askew, whose father died Nov. 24th. A speedy recovery is wished for her brother, who is recuperating following an operation. Others on the sick list include *J. B. Jennette, Jr.*, patient at Duke Hospital; *Major Daughety*, who is much improved but still unable to return to work; *E. L. Nobles*, reported improving after an illness; and *W. P. Whitley* and *E. L. Tripp*, recent hospital patients. We extend our sympathies to Mr. and Mrs. *C. D. Bass*, in the recent death of her brother.

ITS A BOY for *Jerry* and Elizabeth *Phillips*. Jerry, Jr., whose father works in the Landscape Department, was born Nov. 16th. Mr. and Mrs. *C. J. Cox* announce the birth of a daughter, Wilma Louise. He is an inspector at New Bern.



"Hello from Germany" is the greeting young Karen Thomas sent to Granddaddy Kelly Tripp with this picture, made when she was only 11 weeks old. Kelly is blacksmith at the Division Shop in Greenville.

DIVISION THREE

By IRENE C. HEWETT

Division Correspondent

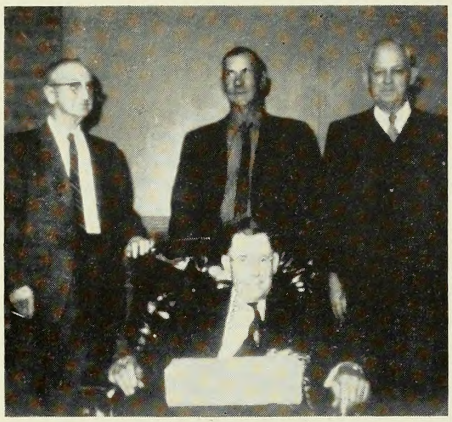
WE WISH a speedy recovery for *R. A. Hux*, Prison Supt., and District 2 Mechanic *A. C. Bond*, patients at Sampson Memorial Hospital; *J. E. King* of the Sign Department, confined to Cape Fear Memorial Hospital, and *J. D. Gainey* of the Road Oil Department, who is convalescing at home.

DEEPEST SYMPATHY is extended to the families of *F. D. Hall* and *Bill Sparkman*, who died recently. Mr. Hall, who had been with the Highway Commission since 1934, died in November and Mr. Sparkman, who had been with the department since 1951, died in October.

GOOD LUCK is wished for Truck Driver *L. R. Bradshaw* and *Hoover B. Faircloth* of Road Oil, who resigned recently.

WE ARE GLAD to have *T. J. Milliken* of the Sign Department, well and back at work.

THE SEASON'S WORK has been finished by the Road Oil Department and vacations began Dec. 9th. Maintenance and Road Oil Departments hope to move into their new buildings after the first of the year. The new Equipment Shop for New Hanover County has been completed and occupied.



An easy chair was presented to Lee Roy Beasley, seated, when he retired recently after 34 years of highway service. He received the gift at a supper given by Division Three employees. Shown with Beasley are the following retired employees: C. E. Brown, Division Engineer; L. F. Hines, Mechanic and Maintenance Supervisor A. K. Mallard. Beasley and his wife, the former Annie Mae Rogers, invite their friends to visit them at their home on Masonboro Sound.

DIVISION FOUR

By JERRY BOYKIN

Division Correspondent

FAREWELL and best wishes to *Mrs. Audrey L. Perry*, of the Division Office, who has resigned to become a full-time housewife and mother. We're all going to miss Audrey's smiling face around here, as well as her untiring efforts as ROADWAYS correspondent for our Division.

AT THE SAME time, we welcome Audrey's replacement, *Mrs. Frances H. (Jerry) Boykin*. In addition to her secretarial duties, she will gather our news for the magazine.

HIGHWAY EMPLOYEES were saddened by the recent death of *J. Frank Conner* of Weldon, who was a District Mechanic. He had been a resident of Weldon since 1936 and was a member of the Weldon Methodist Church where he was a steward. Sympathy is extended to his widow, as well as to the family of Truck Driver *Wade C. Mosley*, who died recently following a heart attack. He retired several years ago due to physical disability. Our sympathy goes out also to the family of *James Thomas Stott*, who died recently. He was a Machine Operator with Wilson County Maintenance.

NEW ARRIVALS include Laura Dale, daughter of the *Milton D. Bradleys* of Halifax; a son for the *Percell Hollands* and a daughter for the *Hiram L. Johnsons*, both of Johnston County.

GET WELL WISHES are extended to Foreman *George Brown*, patient at Duke Hospital; Truck Driver *Will Henderson* who suffered a back injury; to Helen O'Neal, wife of *J. W. O'Neal* and Mary Margaret Thigpen, daughter of the *William Thigpens*, who were hospitalized recently. *Elmond B. Lane* of Johnston County is still out due to extended illness, and *J. H. Carter* of Tarboro and *C. W. Little* of Weldon remain on sick list. Wilson County Maintenance Supervisor *Paul Fulghum* has returned to work after an extended illness. *Ernest Willie Owens* retired recently on disability after 17 years of service.



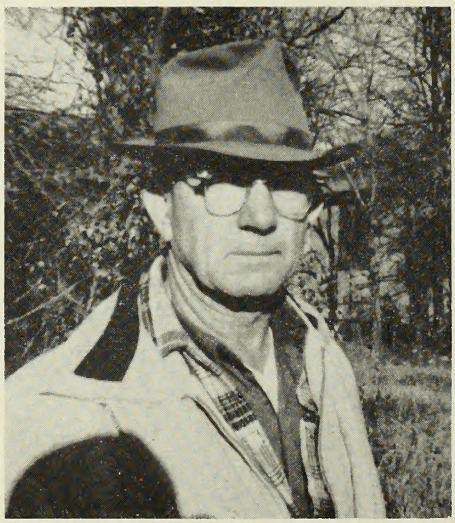
At a recent Safety meeting, service awards were presented to these Wilson County Maintenance employees. Front row: Pervis Bryant, 10 years; Marvin Owens, 10 years; John Williams, 15 years. Back row: E. R. Hill, 30 years; Ernest Lamm, 25 years; Wiley Wood, 10 years; Marvin Garris, 15 years; Elton Fulghum, 15 years. Not shown, Luther Ayers, 15 years.

SERVICE AWARDS were presented at a recent Nash County Safety Meeting: *Leo Cook*, 10 years; *John E. Delbridge*, 15 years; *C. P. Moss*, 15 years; *T. M. Moss*, 15 years; *C. B. Taylor*, 15 years; *J. L. Womble*, 20 years J. *V. Kemp*, 25 years; *S. M. Anderson*, 30 years; *R. W. Hawkins*, 30 years and *W. L. Kemp*, 35 years.

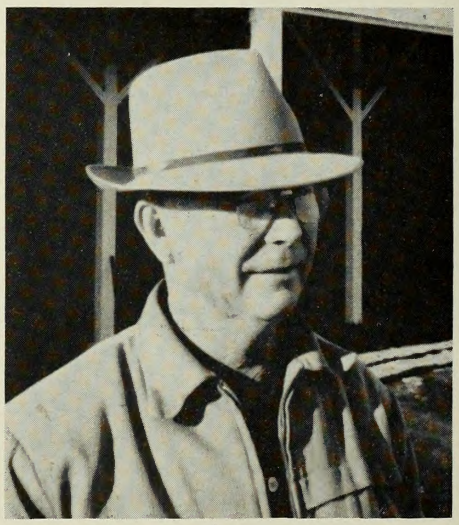




Here is a portion of the crowd at the Christmas party held in the Wayne County Maintenance Yard. At the right, District Engineer J. I. Lynch, Jr., and his wife Margie are shown at the party.



Haskett



Evans

Two of the 35-year men in the Fourth Division are Maintenance Foreman Clyde V. Haskett, left, of Johnston County, and Maintenance Foreman J. W. Evans, right, of Wayne County.

DIVISION FIVE

By PEGGY B. BRIGHT

Division Correspondent

WEDDING BELLS rang out recently for Jo Anne Crissman, daughter of Road Maintenance Supervisor and Mrs. *C. W. Crissman*, and Ronald Cartner. The newly-weds are making their home in Durham.

DURHAM COUNTY employees held their annual Ladies Night recently. Everyone enjoyed the delicious meal, which was followed by a square dance.



PLAYTIME PALS — Randy Roberts and his pup take time out from play to have their picture made. Randy is the son of Mr. and Mrs. Ralph Roberts. Daddy is employed in the Division Five Equipment Department.

A BIRTHDAY CAKE was presented to the following in honor of November birthdays: Division Engineer *J. W. Jenkins*, back at work after a long illness; *Mattie K. Hall* and *E. L. Bullock*.

IT'S A BOY for the *J. C. Hortons* of Person County. The youngest Horton arrived on November 16th.

VISITORS during the holidays included: the *C. M. Brights*, who spent several days with her sister in Beaufort; the *Leon Harris* family, who visited relatives in Roanoke Rapids. Mr. Harris enjoyed a day of hunting. The *J. W. Halls* had his parents from Charlotte and a niece and her family as recent week-end guests.

BEST WISHES to *Cloyce Alford*, who underwent a recent tonsillectomy at Rex Hospital in Raleigh; to Machine Operator *C. L. Holt*, a recent patient at Person County Memorial Hospital; and to *I. F. Mangum*, who was hospitalized recently. We are sorry to report the disability retirement of *L. L. Lawrence*, who had been with the Commission for 34 years and was Area Foreman prior to his retirement.



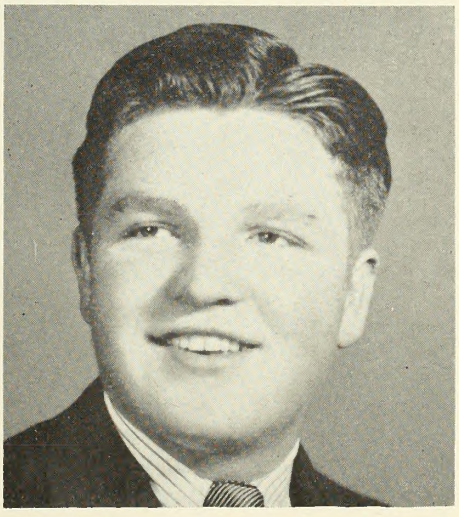
J. L. Davis, Maintenance Foreman in Division Five, died Nov. 22 at Watts Hospital. He had worked for the Commission for 34 years. His widow, the former Selma Yates, survives.

SOME PEOPLE have all the luck. Sign Helper *H. R. Wilkens* of Person County caught a 7 pound rock fish at Buggs Island. A two week vacation was enjoyed recently by *Bernice Turner* of the Prison Department.

THE REASON for that big smile *H. C. Moody* is sporting these days is the new member of his family, little Pamela Jill.

ATTENDING the employees convention in Asheville were *R. J. Woody*, *Howard L. Riggan* and *R. W. Hamlin*.

THE MOUNTAINS was the destination recently of *B. F. Vaughan* and *A. C. Slaughter*. Fishing was good when Vaughan, *S. B. Peed*, *E. T. Painter* and *G. C. Rhew* went to Morehead.



Millard Guy, son of Section Foreman and Mrs. L. S. Guy of Division 5, along with Nels Potter, has signed a contract with Chris Records. He has been touring with personalities such as Sunset Carson and Lash LaRue, and has just released two new records: "Christmas Without Daddy," and "Just Let Me Go." He and his wife live in California and have a five-year-old daughter.

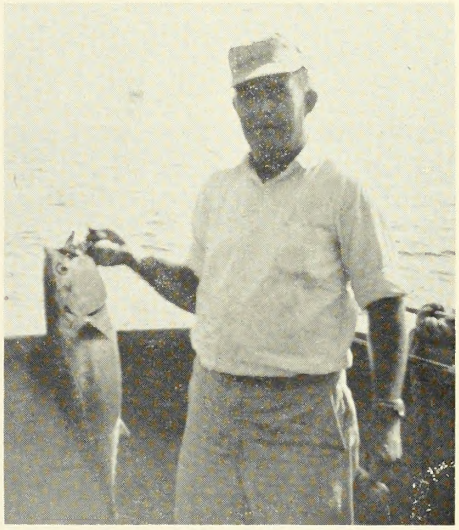
DIVISION SIX

By STEVE AMMONS

Division Correspondent

CONGRATULATIONS to *Perry Dillard* of the Maintenance Department, and Mrs. Eula Williamson of Evergreen, who were married recently.

LATE VACATIONS were enjoyed by the following: the *F. W. Hammonds*, who spent some time at Ocracoke, Atlantic Beach and in New York City; *L. H. Suggs* and family, who report a nice Florida trip; *M. E. Stevens*, who went to Miami, Fla., and *W. F. McQueen*, who spent some time in Virginia and Delaware. *Broughton Blackwell*, student at Campbell College, spent the holidays with his parents, the *Homer Blackwells*.



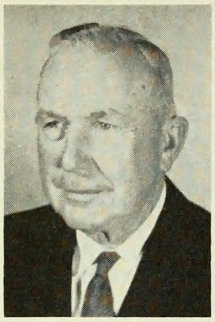
They were biting the day Machine Operator Elwood Edwards of Bladen County boated this beauty off Carolina Beach recently.

WE ARE GLAD to have *G. E. White* of the Bridge Department back at work after having been out as a result of an accident last March.

BEST WISHES to Mr. and Mrs. *Willard Simmons*, proud parents of a son, born Oct. 23rd. Willard is with the Bridge Department.

GET WELL wishes are extended to Machine Operator *D. R. Benson;* to *W. K. Everett's* wife; to Machine Operator *C. A. Jackson;* to Machine Operator *H. W. Johnson* and to Mrs. *A. K. Ivey*. It's good to hear that Mrs. *J. B. Clark* is recovering nicely following an appendectomy and everyone is glad to have *J. G. Lanier* and *D. W. Weaver* back at work following recent illness.

VETERAN HIGHWAY employee Roy McKeithan retired on October 1st, after 39 years of service. Joining the Department in 1921, he worked out of the Wilmington office for several years and came to Lumberton and Robeson County to work in a supervisory capacity in 1928.



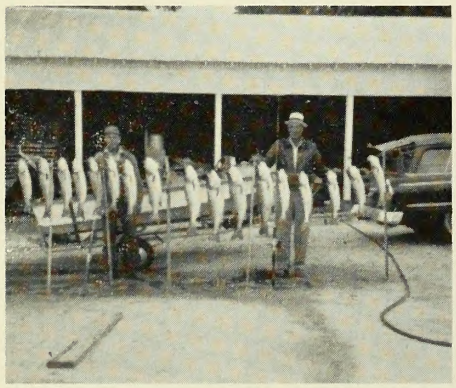
McKeithan

The Carlton Restaurant was the scene of a dinner party given by Robeson County employees in his honor. Special guests were his wife, two sons, Frankie and Nick, and a daughter - in - law, Mrs. Nick McKeithan. Speakers included Division Engineer Jack Spruill and retired supervisor L. M. Powell, who had worked with Mr. McKeithan for a number of years. A gift was presented to the honoree.

THE SUNSHINE STATE of Florida was the destination of Maintenance Foreman and Mrs. *W. P. Holland*, who visited relatives there; as well as Machine Operator *J. A. Allen* and family, who report a nice trip and a vist with his brother.

AT LEAST one person is putting his first aid training to good use. *G. T. Johnson*, Maintenance Yard Assistant in Harnett County, served as first aid man for the Lillington High School football team.

SYMPATHY is extended to *L. C. Dean*, whose mother died recently, and to Machine Operator *L. E. Horne* in the death of his wife.



PRIZE CATCH—D. W. Taylor, right, who works with the Bridge Department in Columbus County and Elwood Fowler, left, are shown with a catch of striped bass they landed at Santee Cooper, S. C. The fish weighed about 150 pounds, the largest one weighing 17 pounds.

IT'S A BOY for Maintenance Yard Assistant and Mrs. *V. R. Autry*, and for Truck Driver and Mrs. *J. D. Owens*.

CONGRATULATIONS to *H. D. Horne*, who is the new Maintenance Supervisor in Cumberland County.

BLADEN COUNTY employees were saddened by the recent death of their long-time co-worker, area foreman *Lee Roy Woodlief*, who had been with the Highway Department for 28 years. He is survived by his widow, the former Elaine Simth, three daughters and one son, to whom we extend our heartfelt sympathy.

DIVISION SEVEN

By P. L. WELCH

Division Correspondent

SERVICE EMBLEMS for 35 years of service were presented to the following men at the Division meeting held late in November: *Earl D. Berry, Arnold W. Jones, Moses S. Stafford, Clarence O. Ward, Ronald H. Farris* and *Emery C. Hughes*. More than 400 persons attended the meeting, which was climaxed with a barbecue dinner.

NEW ARRIVALS include a boy at the *Russell Whitt* home. Whitt is a machine operator in Alamance County. Other new parents are Mr. and Mrs. *Layton Gunter, Jr.*, who have a daughter, and the *Homer Ingles*, who have an addition to their family.

A SPEEDY RECOVERY is wished for Machine Operator *Alton Kimball* and *Jesse Hall* of the Construction Department and to Maintenance Foreman *R. G. Graves* of Caswell County, who was injured in a recent automobile accident. Get well wishes go out also to Mrs. Ila Graham, wife of *Robert V. Graham* and to Mrs. Hazel Freeland, wife of *Louis G. Freeland*.

A HUNTING TRIP to the eastern part of the State was enjoyed by Road Maintenance Supervisor *C. I. Walters* of Orange County. We extend sympathy to Walters in the death of his brother-in-law, James L. Davis.

About 10 per cent of the people do the world's thinking, so we're told. Judging by the results, about half of them would do more good by going to work.

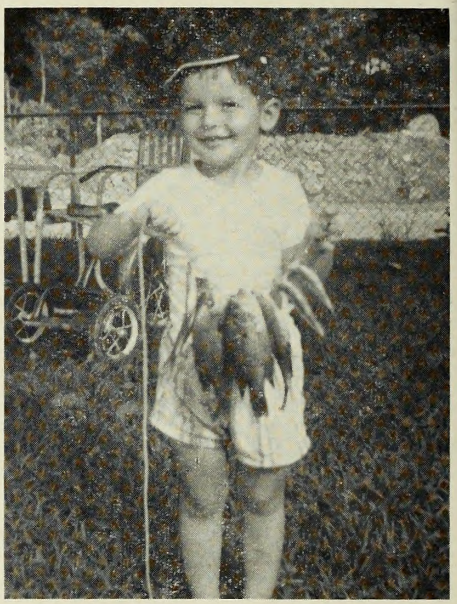
DIVISION EIGHT

By VIRGINIA S. WILLIAMSON

Division Correspondent

CONGRATULATIONS to the *Billy Dunlaps* on the birth of a son. Billy is with the construction party assigned to Resident Engineer *R. G. Southall*.

KEEPING US GUESSING these days is secretary *Lois Godfrey*, who came in recently wearing an exquisite diamond. All we have been able to learn is that it came from the general direction of Greensboro.



BEGINNER'S LUCK—Young Steven Carol Williams displays the results of a recent fishing trip. He's the grandson of T. M. Williams, mechanic at the Division Eight Equipment Shop at Asheboro.

AMONG THOSE in the hospital have been *C. L. Britt* and *A. T. Parsons* of District 3. *Prentice Lee Patterson* of District 2 has been in Duke Hospital for treatment of an eye infection. Maintenance Supervisor *Dexter Hough is* reported improving following surgery at Moore Memorial Hospital. Charles Randal Murray, son of Charles B. Murray, had his tonsils removed. *James D. Thomas* has been sick for quite some time now.

A WELCOME VISITOR was Mrs. Kennie Meeks of Norfolk, Va., known to us as *Janice Hemmens*, former secretary in the Right-of-Way Department.

DIVISION EMPLOYEES were saddened by the automobile accident that claimed the lives of Chatham County employee *James Worth Jones* and his wife Leta O. Jones.

LADIES NIGHT was held by the Moore County Chapter of the Employees Association, and employees were proudly showing off their new maintenance quarters.

THE FAMILY of *Robert Weldon*, Maintenance Yard Assistant, is to be congratulated on their fine Sunday School Attendance record. Jean Carolyn, 14, has received her four-year perfect attendance pin; William Robert, 16 months, his one-year perfect attendance pin and Mr. and Mrs. Weldon each have received two-year pins.

RECENT COLLEGE graduates include Sylvia Frances Bridges, daughter of Mr. and Mrs. *J. B. Bridges*, and Eddie Darden, son of *E. C. Darden*. Sylvia graduated from Woman's College, University of North Carolina, Department of Nursing. Eddie, a graduate of the University of South Carolina, is working on a newspaper in Cheraw, S. C.

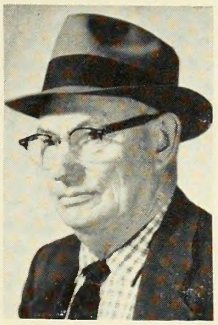
ATTENDING the convention in Asheville were the following: Mr. and Mrs. *T. C. Johnston, Jr.*, Mr. and Mrs. *Z. V. Tolar*, Mr. and Mrs. *C. B. Groce*, Mr. and Mrs. *Clayburn Wicker*, *Mrs. Virginia Williamson*, *Douglas Patrick*, *T. H. Stinson*, *Delbert Hodge*, *Claude Raines*, *J. D. McInnis*, *T. M. Williams*, *J. H. Cole*, *Gentry Morgan* and Mr. and Mrs. *H. T. Bundy*.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

BEST WISHES and good fortune to Resident Engineer *J. A. Kennedy*, who is retiring soon. He started his career in highway work in in 1922, as a rodman. Later, he was promoted to Resident Engineer, serving in Durham and Albemarle before coming to Rowan County.



Kennedy

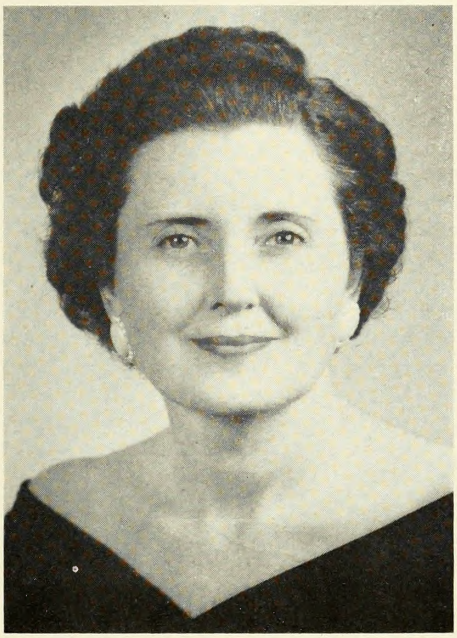
GET WELL WISHES are extended to *J. O. Crotts* of Davidson County, who has been on extended leave due to illness; and to Mrs. Mildred Wooley, wife of *W. F. Wooley*, who is recuperating following surgery.

THE HOLIDAYS were highlighted by several parties. The District II shop had a party early in December, with some 80 persons in attendance, and McClure's Charcoal Steak House was the scene of the Right-of-Way and Appraisal Department party.

DEER HUNTING has been quite popular with our folks this year. Those reporting kills include *Luther H. Berrier*, *Dewey Allen*, *Don Rentz* and *Eric Culler*.

CONGRATULATIONS to Mr. and Mrs. *Reuben W. Brown*, who are the parents of a son, Timmy Wilson, born Oct. 5th. The proud pop is a truck driver with the Maintenance Department in Forsyth County.

CONDOLENCES are extended to the family of *Norman Hester*, who died recently. An employee of the Road Oil Department, he joined the Highway Commission in 1953.



Mrs. Lamon Eaton, prior to her recent marriage, was Leona Joyce, daughter of Mrs. Wallie Joyce and the late Mr. Joyce. Mr. Eaton works with the Maintenance Department in Stokes County.

BEST WISHES to *Onlie McLaughlin*, inspector with the Construction Department, and his bride, the former Judy Shoaf, who were married Nov. 20th. The new Mrs. McLaughlin works at Wachovia Bank in Salisbury.

DIVISION TEN

By J. W. JONES

Division Correspondent

THREE PARTIES highlighted the holiday season in our Division. Union County employees, their families and guests enjoyed a chicken supper, plus good entertainment. Steele Creek maintenance employees celebrated the holiday with a turkey dinner at the club house in Charlotte. More than 100 persons gathered around the tree for carol singing. Last, but not least, was the party staged by the Huntersville maintenance employees at their club house several days before Christmas. Employees, their families and guests were invited to enjoy the barbecue dinner, which was followed by carol singing and a square dance. The Charlotte Shop celebrated Christmas with a steak party at the Equipment Depot. Employees, their families and guests enjoyed an evening of delicious food, entertainment, singing and dancing.



Displaying his kill here is Grover H. "Peanut" Rogers of the Equipment Department in Division 10. He bagged the 178 pound buck in his native Stanly County. It will take a long time before "Peanuts" will be heard talking about anything else.

HOLIDAY VACATIONISTS included *L. M. Pender* and his wife, who spent the holidays with their daughter and family in Philadelphia, and *H. R. Shelton* and his wife, who toured Florida with a group of friends. *H. R.* and Shirley *Polk* also visited Florida.

FREEZERS are well stocked, according to *Bill Pender* and *B. D. "Jack" Herrin*, who report good luck rabbit hunting. Other hunters include *C. R. Barbee*, *S. T. Moore* and *C. B. Maness*, but no report on their kill. *J. E. Tucker*, *R. D. Fisher* and *Claude Ridenhour* have been doing some fishing.

SYMPATHY is extended to the family of *James H. Flake*, who died recently. He had been with the Road Oil Department for 14 years. We send our condolences also to *W. L. Penninger*, in the death of his mother, and to the family of *Brady Williams*. His life was snuffed out Nov. 27th, by a 22 rifle bullet. He was only 42 years old, and had been with the Department for more than 15 years.

A BIG WELCOME is extended to Mrs. L. C. Porter, new stenographer in the District 1 maintenance office.

BACK AT WORK after a kidney operation is *R. L. Lowery*, of the Anson County Maintenance Yard. We are also glad to have *J. T. Beachum* back at work following a heart attack. Eddie, son of District Engineer *E. M. Finison* of Charlotte, suffered a broken collar bone during the football season, but has recovered sufficiently to play basketball this season. Glad to hear that *Horace Goodrum's* wife is recovering following a recent illness.

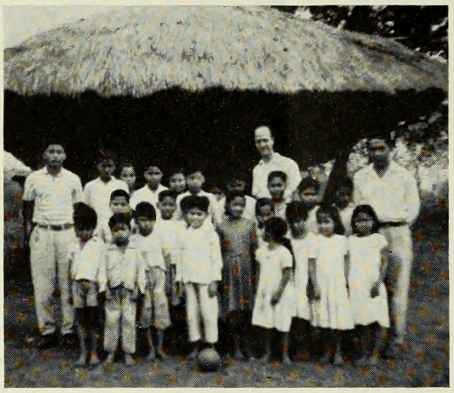


Earl J. Brinkley, Parts Supervisor in the Division 10 Equipment Department, is shown with his brother, Henry, holding some of the pheasants killed by them on a recent hunting trip to South Dakota. The trip has become an annual event with them and the party numbered seven persons this year. They report good weather on the trip, although it was cold. As usual, they bagged the limit.

NEW ARRIVALS include a son for Mr. and Mrs. *George S. Thomas Jr.*, of Concord, and a son for the *C. Woodrow Hargetts* of Union County. Seventeen years have elapsed since the birth of the Hargett's last child, and they have six grandchildren also.

A FAMILIAR FACE will be missing soon when *W. B. Martin* retires after more than 30 years of hard work. We're certainly going to miss Brady but wish him good luck in his retirement. He worked as Anson County Road Foreman prior to 1931 when the Highway Commission took over the Secondary Road System.

After four years of missionary work in the southern part of the Mato Grosso of western Brazil, Geddie B. Strickland, Jr., is spending a year's furlough with his parents, Resident Engineer and Mrs. G. B. Strickland of Albemarle.



Strickland and Friends

For the past year and a half, he has been the only missionary in an Indian village of over 500 people. Directing an evangelical school and counseling the native church have been his main work. The only link with the nearest town, Sidrolandia, is a 35 kilometer single track dirt road which as Geddie says, "has to be put back in after every rainy season." Though he found his horse a dependable means of transportation, he says he dreamed of the time he'd be back in North Carolina to enjoy the smooth highways.

His next term of service with the South America Indian Mission, which exists "to carry the good news of salvation to the unreached Indians in the interior of South America", will be five years.

DIVISION ELEVEN

By CORA LEE GREER

Division Correspondent

THE HUNTERS are back empty-handed! *Simon Shermer* and *D. S. Ingram* took late vacations and Ingram reports he spent a week deer hunting with no luck. *Jay Brookshire* spent several days deer hunting, shot a bear, and trailed him for several hours before giving up. *Bill Shepherd* and *Ralph Jennings* spent several days deer hunting also, but the deer wouldn't come out.

VISITING over the holidays was *Martha Jean Pearson*, former stenographer in the Elkin office, who is in training for X-ray technology work at Cabarrus Memorial Hospital. *Paul West* and family spent the holidays in Fairmont and at Holden's Beach.

CONGRATULATIONS to Mr. and Mrs. *A. L. Davis, Jr.*, and their two young sons, who have just moved into a new home. Davis was transferred here from Division 13.

WELCOME to the following new employees: *S. H. Tillotson, J. C. Combs, R. T. Moseley, D. E. Speight, G. M. Sparger, R. C. Wishon, C. P. Jolley, J. A. Steele, R R. Jarvis* and last, but not least, *Mrs. Betty Marion*, new stenographer in the Elkin District Office.

GET WELL WISHES are sent out to *C. M. Nixon*, who suffered a recent heart attack; and to *R. G. White* and *J. L. Caudill.*

CONDOLENCES to Mrs. *James Atwell* in the death of her brother.

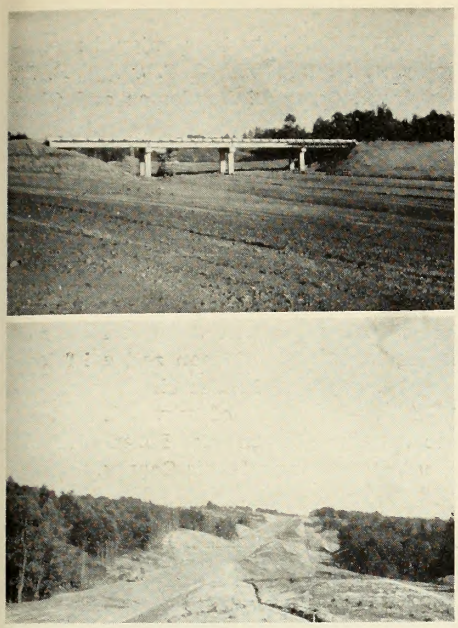


Luther R. Kiger, Motor Grader Operator, who retired recently after 34 years with Yadkin County and the State. He is married to the former Lettie Gough and they make their home in Yadkinville.

BEST WISHES to *C. S. Nixon*, who was with the Highway Department for 20 years, and to *James C. Bray*, who worked for the Department for 25 years. Both men retired recently and we wish them health and happiness in their retirement.

ATTENDING the employee convention in Asheville were *R. M. Bradshaw, C. S. Lewis, E. F. Baird, Webb Weatherman, J. L. Kirby, W. H. Busic, Hayden Moxley, Paul Haynes, Grady White* and *G. C. Phillips.*

TRANFERRED recently from Rutherfordton to North Wilkesboro to work with construction was *R. A. Terrel. Joe Dennis Trivette* of Sugar Grove, has joined the construction party at Boone. He attended Bethel High School and Lees McRae College and is married to the former Glenda Henson.



Here are two scenes from a Yadkin County project now nnder construction. The project is for grading, base course, surfacing and structures on 8.65 miles on relocation of US 421, from a point on US 601 approximately 1.07 mile south of Yadkinville, easterly to a point about 3,000 feet west of the Forsyth County line and connection to existing US 421 at the end of project. Blue Ridge Structure Co., has the structure contract at a cost of $201,731.17, while Asheville Contracting Co., and Davie Contractors have the roadway contract on the project, at an estimated cost of $846,484.20. Resident Engineer on the project is C. S. Lewis.

DIVISION TWELVE

By JEAN CLINE

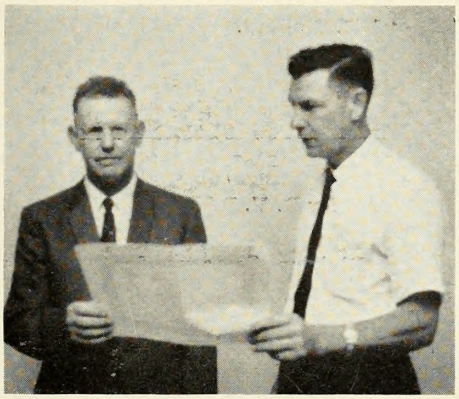
Division Correspondent

PARTIES highlighted the holiday season, beginning on Dec. 2, with the annual Christmas dinner of Iredell County employees. Barbecue with all the trimmings was on the menu at this party, as well as the one staged for Cleveland County employees and their families. The Division Office party was held on the night of Dec. 22nd.

BEST WISHES to our newly-weds, Mr. and Mrs. *Paul Bunn*, who were married Nov. 26th. He works in the Right of Way Department. The bride is the former Mary Lu Fowler of Whiteville.

OUR SPORTSMEN, both fishermen and hunters, report bad luck. *J. E. Abernathy* returned from a deer hunt, minus the game, as did *Ben Palmer*. The *P. W. Streets* and the *Gene Laidlaws* spent a week-end at the beach fishing. Also trying their luck were *Carl Allen*, *A. B. Devinney*, *John Sellars* and *Laidlaw*, who spent the week-end on a small island off the coast. *Gib Bowles* and *Charles Mauney* enjoyed several days of deer hunting, but with no luck. *J. W. Alexander* spent a long week-end at Manteo fishing. Though he didn't catch too many fish, he reports an enjoyable time camping out and seeing some new country. We have no reports on the results of a recent coastal fishing trip by *E. W. Champion* and *J. B. Sain*.

IT'S A GIRL for Mr. and Mrs. *Talmadge McDaniels*, born Oct. 13. Foreman *V. B. Reavis* now can boast about his first grandchild, born Oct. 15th. Foreman and Mrs. *John Bradburn* enjoyed a visit in Orlando, Fla., where they went to see a new grand-baby.

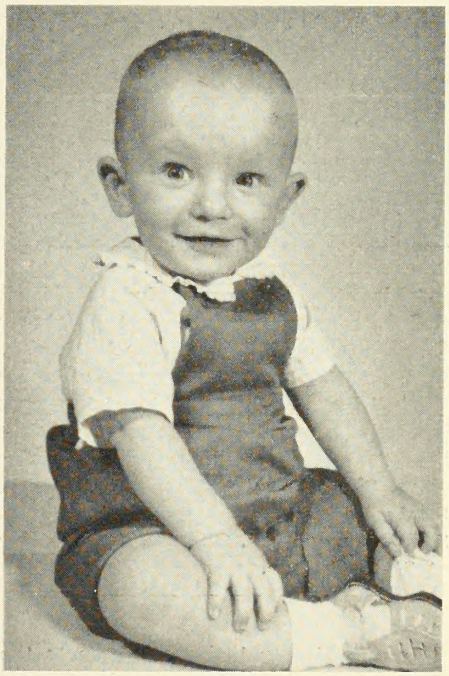


Harold Floyd Setzer is shown receiving his 35-year certificate and service emblem from District Engineer J. I. Church of the Twelfth Division. Setzer is gang foreman in Lincoln County. A native of Claremont, he joined the Highway Department in 1921.

THE SICK LIST seems to increase. Those who have been sick or hospitalized include: *J. B. Robinette*, *J. R. Robinson*, *W. H. Chapman's* son Hall; *I. B. Curlee*, Mrs. *A. H. Arndt*, Mrs. *Y. T. Martin*, Mrs. *H. B. Rhyne*, Mrs. *L. D. Gaither*, Mrs. *J. B. Murdock*, Mrs. *V. B. Reavis*, *W. H. Johnson's* daughter Louise; *J. P. Padgett's* son Terry, Mrs. *C. L. Allen*, Mrs. *M. C. Pharr*, *G. C. Rupard*, *Wade Harbin*, and Douglas Jackson, son of *Harold D. Jackson*. The following are back at work after illness: *John Rollins*, *S. D. Whiteside*, *Bill Bradshaw*, *D. H. Welborn*, and *A. B. Morrison*. *C. A. Matlock* continues ill.



Ural Franklin Poovey retired recently after more than 30 years of service with the Highway Commission. A native of Catawba County, he had been Bridge Foreman in Iredell County since 1946. Poovey is married to the former Estelle Propst of Catawba County. They have five sons and live at 282 14th Avenue, Hickory. Mr. Poovey says that although he is going to miss his many highway friends, he hopes to find more time for gardening and other jobs around home, and for regular visits to his Lake Hickory cabin.



Meet Terry Goodson, year-old grandson of J. A. Ballard, veteran employee of the Equipment Department in Catawba County.

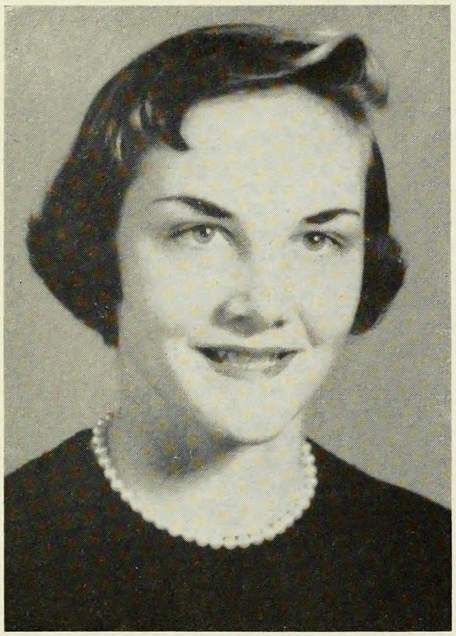
NEW EMPLOYEES include *Ben Houser* of Lincolnton and *David Sprinkle* of Statesville, both in Location; and *Paul Grant* of the Landscape Department.

WE REGRET to report these deaths: retired foreman Joe Costner of Cleveland County, who had been retired since 1949; *J. E. Smith's* father, and the mother of *D. F. Rogers.*

BEST WISHES to the *F. D. Rohrbaughs,* whose daughter, Catherine Ann, was born Oct. 31st. Daddy works in the Location Department.

WE WILL MISS Walter Ledford of Cleveland County, when he retires on disability.

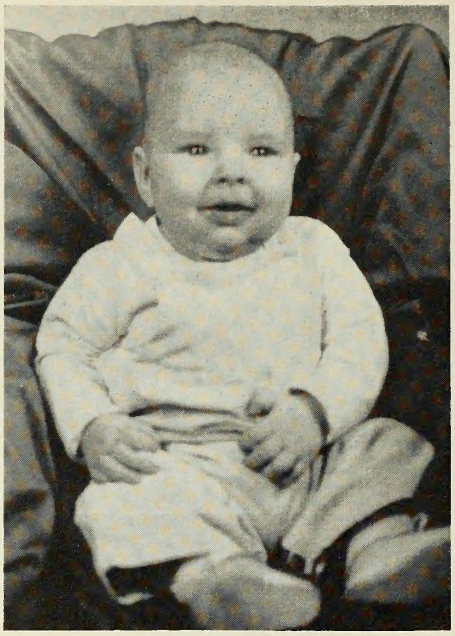
RESIDENT Engineer and Mrs. *W. A. McNeill* spent the holidays in Americus, Ga.



This attractive young lady is Edith Smith, daughter of District Engineer C. R. Smith of Albemarle. A member of the senior class at Albemarle Senior High School, she is captain of the girls basketball team and was named the "most athletic" member of the senior class. She was a sponsor for Governor Sanford's inaugural ball in Raleigh. Mr. Smith has one son, Charles, Jr., a senior at State College.

Cy and his son had never been to the city before and had seen only dirt or gravel roads.

Scraping his feet back and forth on the asphalt street, he turned to his son and said: "I don't blame 'em for building a town here. The ground is too hard to plow anyhow."



This young man is James Donald Roland, son of Machine Operator and Mrs. Edward R. Roland.

DIVISION FOURTEEN

By D. V. RAXTER

Division Correspondent

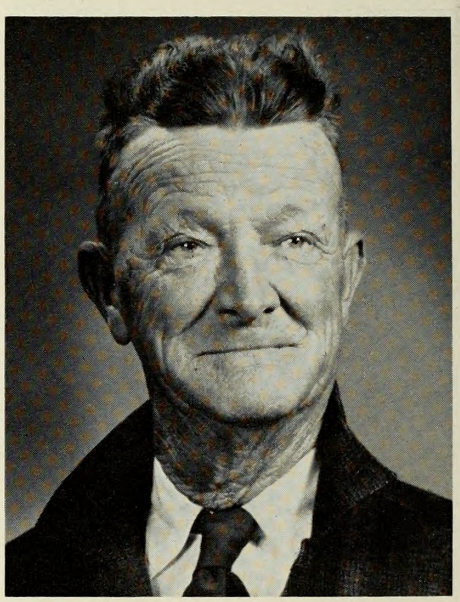
NO PLACE LIKE home is the lesson *Don McCracken* learned when he and his family went along to chaperone the Appalachian College cheerleaders on a trip to Florida. He came back with a cold! *Johnny Colville* went to Raleigh for a wedding—not his own. *Allyce Cunningham* and family went to Alabama for the holidays, stopping off in Georgia for some sight-seeing on their return. Allyce says Tar Heels would be proud of their good roads if they tried driving over some of those in Georgia!

A SPEEDY RECOVERY is wished for *R. C. Whiteside, Charles T. Case, G. C. Whitmire, John Plott* and *Fletcher Trantham,* who are on sick leave; for Mrs. Helen Cash, wife of Road Maintenance Supervisor *R. A. Cash,* and *Guy Hill,* who suffered a recent heart attack.

CONGRATULATIONS to these new parents: the *Clifford Warrens,* a son, John Terry, born Nov. 15th; Mr. and Mrs. *Dwight Welch,* a son, Mark Deitz, Nov. 16th., and the Joe Ginns, a son, Jeffrey Hamilton, born Nov. 6th. Warren and Welch are with the Construction Department and Ginn is a clerk in the Maintenance Department.

VACATIONS have been enjoyed recently by *A. H. Heaterly, J. C. Stepp, R. H. Landreth, Oscar D. Henderson* and *Clayton Trantham.*

AFTER 41 YEARS of continuous service, *W. S. McNeil,* bridge inspector, retired the last of September. He began work in 1919 with the Location Department in Madison County. He makes his home with a daughter and her family at Enka, is an active Mason and a lifelong member of the Methodist Church. A certificate for 35 years of service has been presented to Maintenance Foreman *R. H Landreth* of Transylvania County.



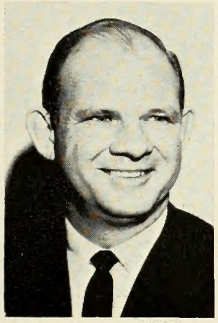
Maintenance Foreman Cyrus Rhodes of Division 3 retired on Oct. 31st., following 29 years of service with the Highway Department. He is married to the former Zelma Dail of Duplin County and they have two sons and a daughter. We will miss him but wish him lots of health and happiness in the years ahead.

A nearsighted man rounded a downtown corner as a large dog coming from the opposite direction bumped into him and sent him sprawling. As he was getting up, one of those small foreign sports cars hit him from the other side and knocked him flat. A good samaritan rushed over and asked if he was hurt.

"I don't think so," said the nearsighted one. "The dog didn't hurt me a bit, but that tin can tied to his tail nearly finished me."

Jones Promoted; Preston Joins Legal Department

G. Andrew Jones, a member of the Attorney General's staff, who has been assigned to the Highway Department for the past several years, has been promoted to the Attorney General's office as Assisant Attorney General.



Jones

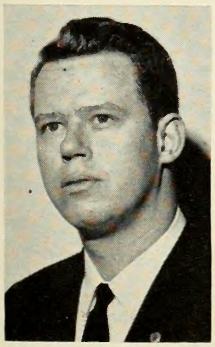
A native of Franklin, Jones received his education in the Macon County schools, Brevard College, John B. Stetson University and the University of North Carolina, where he received his law degree in 1949.

Prior to joining the legal staff of the Highway Commission in 1958, he served as chief of the law enforcement division of the N. C. Wildlife Resources Commission, and had practiced law in Raleigh and Franklin.

Jones is a veteran of World War II and holds the rank of Commander in the Naval Reserve.

He is married to the former Betty MacCartney and they have two children. They live at 3033 Lewis Farm Road in Raleigh.

A new trial attorney joined the Highway Department's legal staff in January.



Preston

He is Edwin S. Preston, Jr., of Raleigh, who for the past two years has served as corporation filing attorney in the office of Secretary of State Thad Eure.

Preston received his education at Darlington Prep School, Rome, Ga., Baylor University, and the University of North Carolina, where he received the LLB degree in 1954. He was admitted to the North Carolina bar in 1954.

A veteran of more than two years service in the Navy, Preston served on the staff of the Commandant of the Fourteenth Naval District at Pearl Harbor as a legal specialist. He did graduate study at Columbia University before joining Eure's staff several years ago.

He is married to the former Dorothy Knott of Knightdale. They have one son and make their home at 3501 Brook Drive, Raleigh.

Signing Policy Outlined For Secondary Roads

At its late December meeting, the Highway Commission adopted a policy with regard to signing secondary roads not on the numbered Primary System.

Under this policy, when a community or communities are served by a Secondary Road and do not lie on the US or NC numbered system, large numbering signs will be installed, showing both the Secondary Road number and direction and mileage information to the communities.

Almost two years ago, the Commission installed plate type, black and white signs, showing road numbers of all its 58,000 miles of Secondary facilities. This numbering system was begun in order to increase efficiency of record keeping and to direct motorists along a given Secondary Road, even though there may be several intersections along the route.

The traditional road name signs will remain in place, along with the new-type signs showing road numerals. Secondary Roads Officer John Swain said "We realize that many persons are accustomed to using the familiar road names and all of the signs displayed on paddle-type, wooden markers will remain as they have always been. Whenever these signs deteriorate due to age or weather, the Highway Department will be responsible for maintaining or replacing them, Swain added.

The actual naming of the facilities is left to local county or city officials since the Highway Commission feels it should not suggest what name local roads should bear, but rather leave it up to local citizens.

Origin Destination Surveys Held In Salisbury, Spencer

An intensive origin-destination traffic survey was held recently in the Salisbury and Spencer areas.

The Planning Department of the Highway Commission conducted the survey as a preliminary step in the development of a comprehensive master thoroughfare plan for streets and highways in the areas.

Six members of the Planning Department staff conducted the survey, which consisted of some 200 home interviews in the Salisbury-Spencer areas. Questions were asked to determine family size, number of cars, typical daily travel information, including points of origin, points of destination, streets and highways used and general habits of parking.

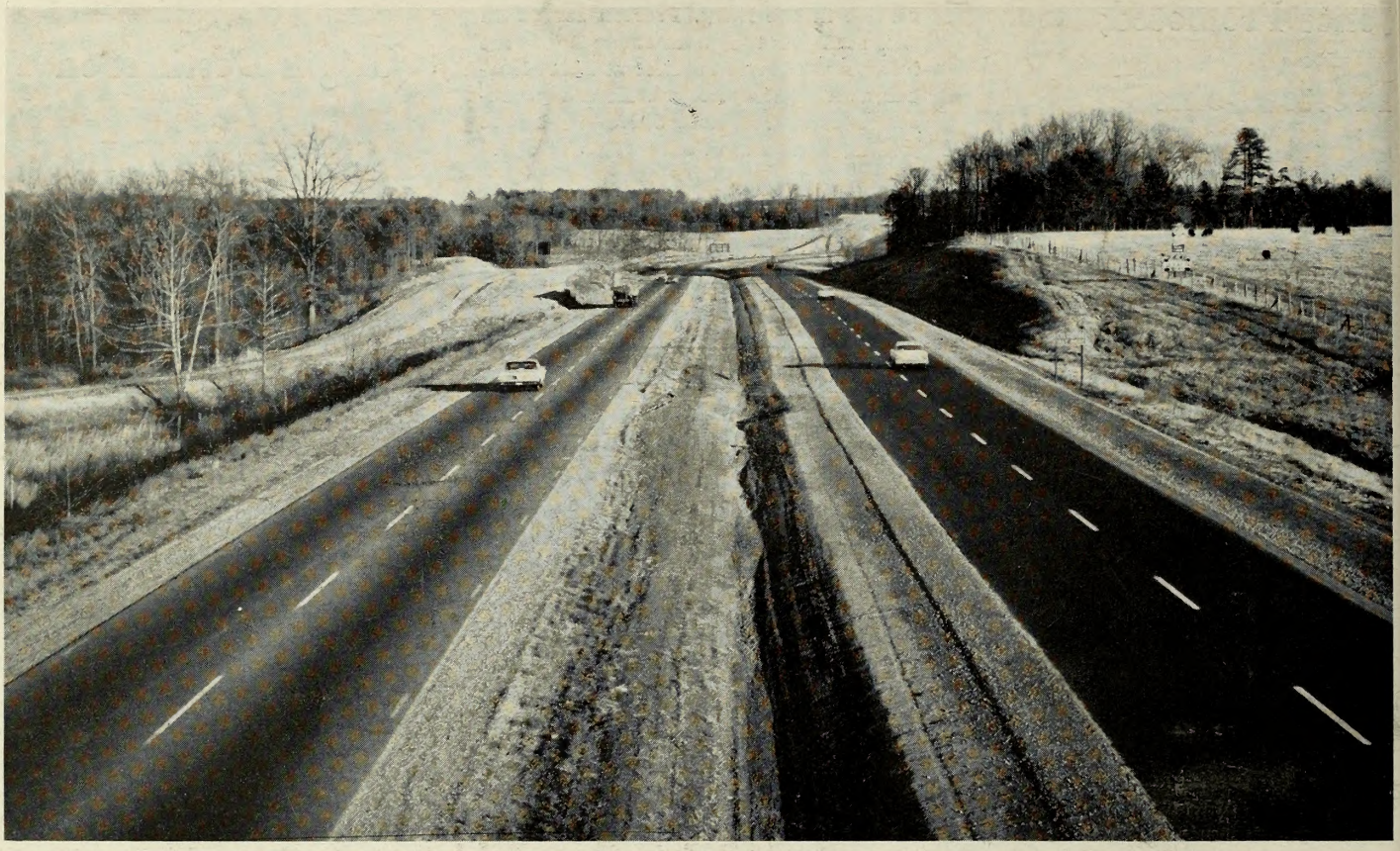
The statistical information gathered in the interviews will be used in the development of an overall thoroughfare plan, which will list major improvements needed over the next several years.

Such thoroughfare planning is in line with the Highway Commission's new policy of cooperation with local municipalities and counties, in order that all street and highway work by either the municipalities or the State will dovetail into an efficient long-range program for the greatest possible safety and efficiency in the movement of people and goods through congested urban areas.

A little boy, caught in mischief, was asked by his mother: "How do you expect to get into heaven!"

He thought for a minute, and then said: "Well, I'll run in and out, and in and out, and keep slamming the door 'till they say, 'For goodness sake, come in or stay out.' Then I'll go in."

Psychiatrists say it's not good for a man to keep too much to himself. The Department of Internal Revenue says the same thing.



Traffic passed over the recently-completed 22-mile long four-lane section of US 70 between Efland and a point near Whitsett for the first time in mid-December. The opening of this section of the route, eventually to be known as Interstate 85, brought to 33 the number of miles of four-laned highway between Durham and Greensboro. In order to allow for repairs to the west-bound lanes, bringing them up to Interstate standards, two-way traffic is being required on five-mile portions of the road, with traffic being routed over the new east-bound lanes of the route. Photo courtesy THE BURLINGTON TIMES-NEWS.

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ROADWAYS



Merrill Evans of Ahoskie — New Highway Commission Chairman

A MAGAZINE FOR EMPLOYEES OF THE N. C. STATE HIGHWAY COMMISSION

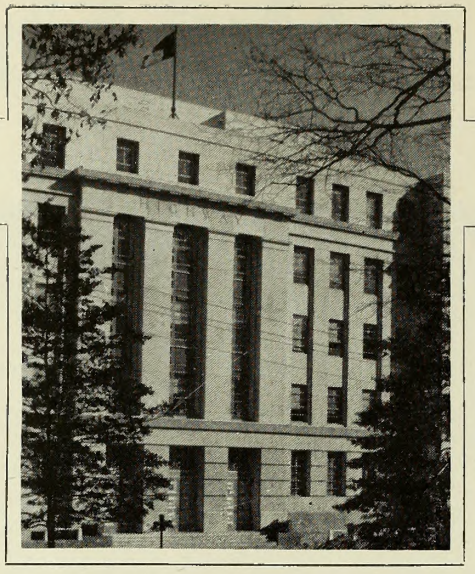
MARCH - APRIL, 1961

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A Publication For
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VOLUME XI
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TERRY SANFORD ..... GOVERNOR
MERRILL EVANS.....CHAIRMAN
STANLEY S. BETTS ..... JAMES W. MASON
ROBERT BUNNELLE ..... R. T. MORRIS
RALPH L. HOWLAND ..... J. LEE WHITE
W. F. BABCOCK .... Director of Highways

March-April

SAM BEARD.....Editor
JEANNE HAWTHORNE.....Assoc. Editor

Ahoskie Man Heads Highway Commission

A man who began his highway services as a truck driver 35 years ago has taken over the duties of Chairman of the State Highway Commission.

Merrill Evans of Ahoskie was named recently by Governor Terry Sanford to fill the un-expired term of J. Melville Broughton, Jr., of Raleigh, who resigned after more than three years as head of the roads body.

The new roads chairman began work with the Highway Department shortly after graduation from college in 1925. His first job, which paid $60 per month, was driving a truck on a construction job. During this time, he worked with Resident Engineer Tom Wilson, in constructing the 30 mile long road from the Currituck County Courthouse to Point Harbor. Evans later served as a bridge inspector and rodman and his salary was increased to $85 a month.

Although Evans left the Highway Department later, he retained a strong interest in road-building. Under Governor Gregg Cherry's administration, he served a four-year term, from 1945 until 1949, as a member of the Highway Commission, when the roads body numbered 10 persons. It was during this time that Evans saw improvements made to a number of secondary roads in his native northeast corner of the State, even though the Secondary Roads bond issue money was not yet available. As a highway commissioner, Evans also saw the paving of the Hatteras Road to Avon, providing better transportation facilities for outer banks residents and visitors.

The new Commission chairman grew up on the family farm at Grandy in Currituck County and received his education in the Currituck County Schools and at William and Mary College, where he graduated with a liberal arts degree in 1925.

After working for the Highway Department, he moved to Ahoskie during the depression and served as a liquidating agent for fertilizer accounts. In addition to his farm supply and fertilizer business, he operates a life insurance agency and public relations business out of his Ahoskie home.

In addition to his term on the Highway Commission, he has served three terms in the Legislature—two in the Senate and one in the House, during the early forties. He served as a member of the Hertford County Board of Commissioners for six years, but did not seek re-election this year. He was active in the recent campaign of Governor Terry Sanford, serving as an official area manager in 10 northeastern counties of the State.

Evans was an early booster for a rural road bond issue in 1949. He suggested such an issue to Charles Johnson, Kerr Scott's opponent for the Democratic gubernatorial nomination. Although Johnson did not advocate the idea, Scott picked it up and made it the number one program of his administration.

Evans is married to the former Margaret Smith of Natchez, Miss., and they have two sons, Andre J. Evans, an attorney at Virginia Beach and Merrill, Jr., a second year law student at Wake Forest College. An active member of the Baptist Church, Evans has taught the Men's Bible Class at Ahoskie's First Baptist Church for the past 20 years, a service which is broadcast over the local radio station.

The Cover

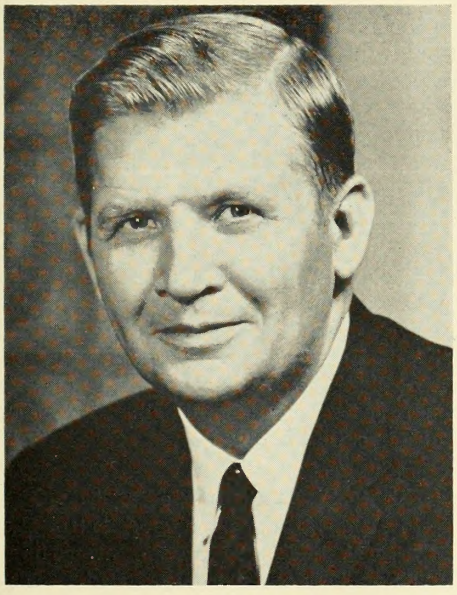
Cover portrait of Mr. Evans by Lawrence Wofford of THE NEWS AND OBSERVER.

More Highway Funds Sought

Messages to State Legislature, Federal Congress Urge Speed-up Of Road Program

The new administrations at both the State and National level have taken early recognition of pressing road problems and have moved in the direction of getting more funds to meet growing needs.

Even though his March 6 message to the General Assembly dealt primarily with tax recommendations for education improvements, Governor Terry Sanford urged that an additional $4,000,000 of State Funds be applied to improvements on the Secondary Road System. For the past three years State Funds for rural road improvements have totaled $12,000,000 annually.



Governor Sanford

In detailing his proposals for additional taxation and education expenditures the Governor pointed to a balance of $4,000,000 in his program saying "I will later have a detailed report for you on the status of the finances of the State Highway Department, but I can tell you now that because of matching federal funds there is virtually nothing left for secondary road construction. This ties in with the proper consideration of school needs, because an urgent requirement is road improvement if we are able to move the school buses. One superintendent in an adjoining county reported more than forty school buses stuck in one week. I recommend that this sum of $4,000,000 be applied in partial support of the prison budget, that an equal amount be released to the highway fund for use in urgently needed secondary road construction."

The Governor's recommendation came after and is in addition to the recommendation of the Advisory Budget Commision.

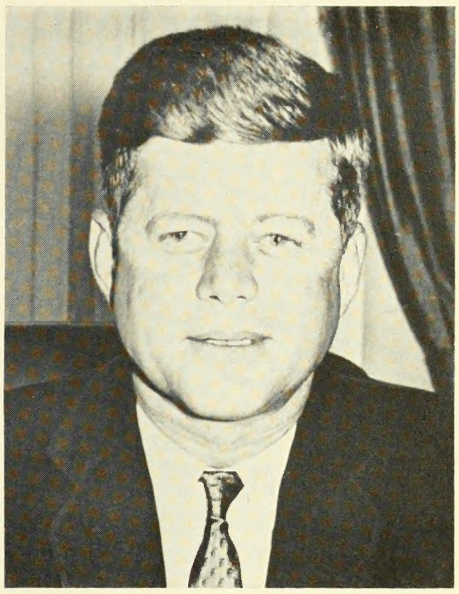
Earlier—in a Feb. 28 address to the Congress, President Kennedy told legislators, "our Federal pay-as-you go Highway Program is in peril." The President said he felt the peril was sufficient to warrant a special message to Congress because of the vital contribution this program makes to our security, safety and economic growth.

The Kennedy proposals included:

1. Retaining the present gas tax of 4¢ per gallon.
2. Increase diesel fuel tax from 4 to 7¢ a gallon.
3. Increase highway tires tax from 8 to 10¢.
4. Increase inner tube tax from 9 to 10¢.
5. Increase levies on tread rubber from 3 to 10¢.
6. Increase tax on trucks of over 26,000 lbs from $1.50 per 1,000 lbs to $5.00 per 1,000 lbs.

Essentially the Kennedy recommendations are based on the intent of completing the Interstate Highway program by 1972 while at the same time authorizing an increase in ABC funds (primary, secondary and urban) by $25 million every other year beginning with 1964 until an annual appropriation of $1 billion is reached in 1968. The President recommended retention of the 90-10 Federal-State formula for construction and right-of-way costs.

Kennedy said he is "wholly opposed to either stretching out or cutting back our highway program and urge the Congress not to rely on either solution. Either step would be unwise at a time when our slump-ridden economy needs greater, not less construction activity. Either step would be unfair to the individual States who have proceeded in good faith, and in reliance on the Treasury's certification of adequate funds, to make plans and expenditures looking to receiving their full apportionment this July."



President Kennedy

The President endorsed the pay-as-you-go financing program and added that, "the scheduled reduction in the gas tax (effective July 1, 1961 barring Congressional action) is fiscally unwise. It was vigorously opposed by the previous administration. It is opposed by this Administration with equal vigor and I ask the Congress to prevent this gas tax reduction from taking effect."

He concluded his remarks by saying "The program—is a realistic program designed to meet an urgent problem. I urge its prompt and impartial consideration."

New Building Among Improvement Projects

Biggest item among seventeen capital improvement projects in the 1961-63 budget recommendations sent to the General Assembly recently by Governor Terry Sanford is a new highway building in Raleigh to be constructed away from the congested area.

(Continued on page 3)

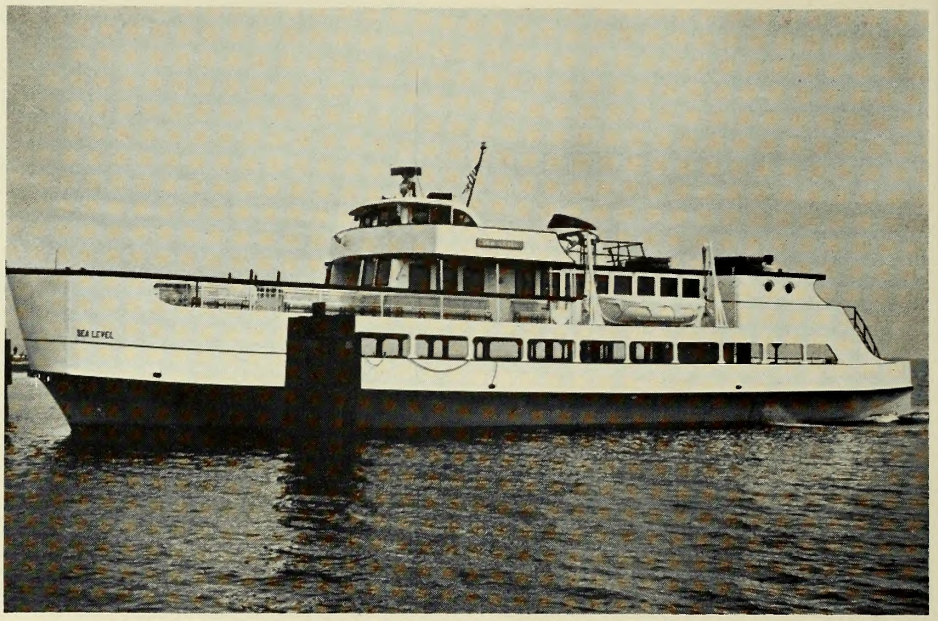
"Sea Level" Joins Highway Commission Fleet

The Highway Commission has agreed to purchase the ferry "Sea Level" and hopes to have the vessel in operation between Atlantic and Ocracoke in early May.

The ferry, including docking facilities, is being purchased from the Taylor Brothers of Atlantic, who inaugurated the service last summer, only to have it interrupted by Hurricane Donna. The Commission hopes to transfer the western terminus to Cedar Island as soon as docking facilities, breakwater and other arrangements are made.

The same tolls and time schedules will be used at the beginning, with one round trip per day. In using the Atlantic dock, the boat will go through Atlantic Channel, Core Creek Channel, Wainwright Channel, approximately 10 miles of Pamlico Sound and through Wallace Channel into Silver Lake at Ocracoke.

The Commission anticipates the same channel problems which the Taylor Brothers encountered. The turning basin at Atlantic is narrow and shallow and the boat frequently drags the bottom. Coming out of Atlantic into Atlantic Channel, a 135 degree turn is required to enter Core Creek Channel and here, the Taylors experienced some groundings.



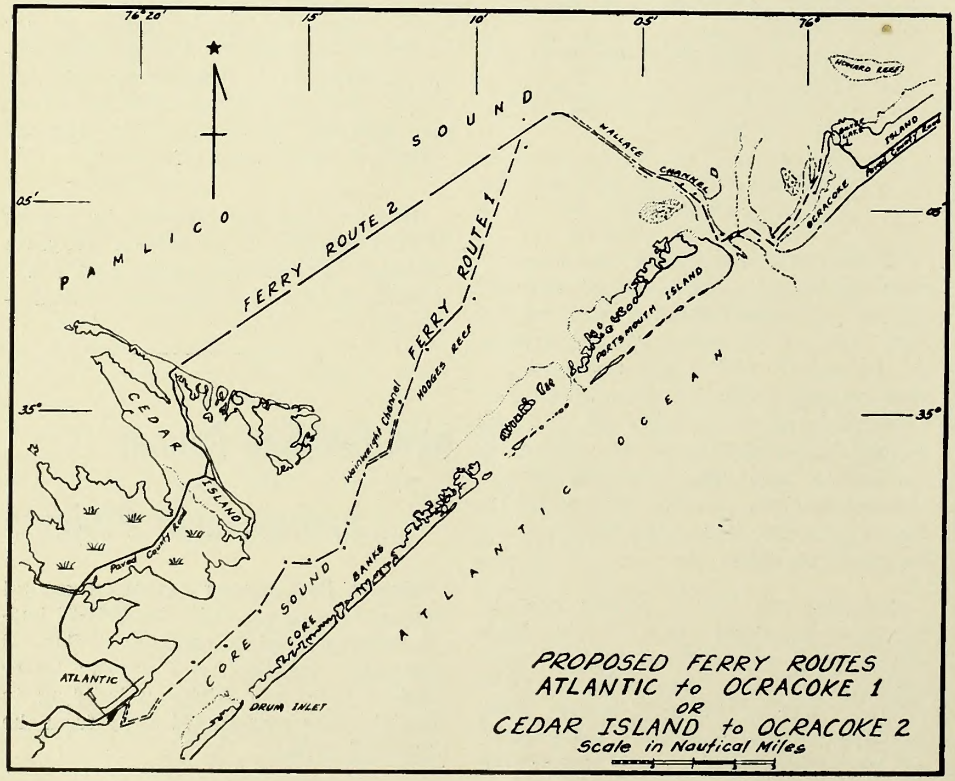
In Core Creek, Wainwright and Wallace Channels, the boat makes approximately 6 knots, but in the open waters of Pamlico Sound, advances to 10 knots. It is powered by two Caterpillar diesels turning up 1,150 rpm's and is equipped with the very latest fittings.

In order to move the Carteret County dock to Cedar Island, it will be necessary to construct appropriate docks and form a breakwater to protect the landing facilities. It is anticipated that surplus World War II vessels can be purchased and sunk in an arc around the Cedar Island dock to form a large turning basin in protected deep water.

Use of the Cedar Island dock will enable the Commission to ultimately make two runs per day on the ferry, where only 1 run is possible with the dock located at Atlantic. The Commission hopes to have the Cedar Island dock ready by mid-summer, during the height of the travel season.

The Atlantic to Ocracoke run requires approximately four hours, while the Cedar Island docking facility would reduce the crossing time to 2½ hours. The Cedar Island dock site is served by a secondary road leading from Atlantic to Cedar Island.

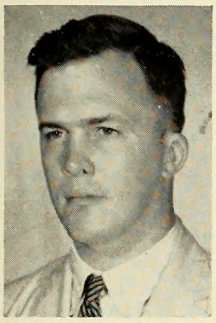
With the decision to operate the ferry, the Commission goes into the toll ferry business for the first time. The Commission now operates free ferry service between Sandy Point and East Lake (across the Alligator River) where a bridge is under construction at the present time; between Hatteras and Ocracoke and from Nags Head to Hatteras. Approval has already been given and a bridge will be constructed at a later date across Oregon Inlet, eliminating the Nags Head to Hatteras run.



Geo. Stephens On Special Assignment

George M. Stephens, Jr., community planner in the Highway Department's Advance Planning Section, has been appointed by Governor Terry Sanford to work in coordinating Federal-State assistance to depressed areas of North Carolina. Immediately after his assignment, Stephens went to Washington to confer with Federal officials.

"If we are going to pick up the ecomic life of these areas—with or without federal aid," said Sanford, "we need to get on with area development."



Stephens

A native of Asheville, Stephens has been with the Highway Department since 1958. He is a graduate of the University of North Carolina, where he also received a masters degree in regional planning. He served as a submarine officer in the Navy.

Stephens is married to the former Karin Holscher and they have a two year old son. They make their home at 1235 Onslow Road, Raleigh.

Speed-Up Action Taken On I-26

The Highway Commission acted last month to speed construction of a short section of the mountainous Interstate Route 26 from the South Carolina line northward to a point near Lynn. Construction of the link would cost an estimated $3,000,000 and Commission action was to place the project in the approved-for-construction list making way for preliminary location and design work at an earlier date.

Director Babcock pointed out South Carolina has constructed all but a very small portion of I-26 through the Palmetto State virtually to the North Carolina line. The very heavy oil tanker traffic using the Interstate is moving into North Carolina on US 176 and through the congested street system of Tryon.

Stepping up construction on a six mile section of I-26 from the South Carolina line to Lynn will allow truck and other long haul traffic to bypass Tryon, proceed on an improved secondary road to Valhalla and then on toward Hendersonville and Asheville over an improved US 176 on which truck climbing lanes are now being constructed.

That portion of I-26 from the vicinity of Hendersonville to Asheville is now under design and right-of-way plans will be completed and acquisition begin within the next two months. The Hendersonville-Asheville section of I-26 is being designed in two sections, first of which is from Hendersonville to Brickton and the second from Brickton to a point just south of Asheville.

NC, Va. Officials Clear I-77 Status At Recent Meeting

An apparent misunderstanding on the status of Interstate route 77 from the vicinity of Elkin to the Virginia line was cleared up last month by a conference of top highway officials in North Carolina and Virginia.

A meeting in Richmond brought together the Old Dominion Highway Commissioner H. H. Harris and Director Babcock and Chief Engineer C. W. Lee from North Carolina. Their discussion centered around two possible locations of this newest north-south Interstate route in the areas between Elkin and Woodlawn, Virginia.

An unidentified Washington, D. C. spokesman had told the press that North Carolina was holding up progress on the Interstate route by failing to agree with Virginia on the route location. The actual fact was that neither Virginia nor North Carolina had made an official location request to the U. S. Bureau of Public Roads, although the Bureau had been notified of the North Carolina position that an eastern routing passing near Mt. Airy would be preferable.

Both Virginia and North Carolina officials agreed to discuss the matter at future conferences after meetings with their consultants.

Last August, following a Highway Commission public hearing in Mount Airy, North Carolina went on record as favoring an eastern location for the route which would swing the road slightly to the northeast of Elkin, pass near Dobson and Mt. Airy and enter Virginia in the vicinity of Pipers Cap. Reason for North Carolina's position was that this routing would place the superhighway closer to major population centers in the Tar Heel State and give better traffic service than a western line which had been suggested earlier to pass through Low Gap.

Construction of the latter route through Low Gap would involve more cost in Virginia and would probably serve about the same traffic demand in the Old Dominion.

NEW BUILDING

(Continued from page 1)

The new highway building would house administrative and engineering offices as well as a completely new laboratory facility. The present highway lab is located in an out-dated building on South Blount Street about a block from the main building.

Cost of the new structure was estimated in the budget at $3,085,000 but sale of the present building to the General Services Division for other State offices would bring in an estimated $2,365,000 of the total. No plans have been drawn and no site picked, but the new building would probably occupy about 200,000 square feet.

Also included in the budget recommendations is $120,000 for truck weighing stations at Lumberton, Hillsboro, Charlotte and Statesville; $159,800 for Division Five shop building; $68,500 for a shop and storage building at the Harnett County Maintenance Yard; $21,000 for a building at the Monroe Bridge Maintenance Yard; $33,000 to provide a new District Engineer's Office in Shelby; $16,000 for a Truck Shed at Newton and $8,000 for a Truck Shed at Lincolnton; $21,000 for a barracks headquarters in Watauga County to serve four adjacent counties; $50,800 for a District and Resident Engineer's office in Elizabeth City; $22,000 to construct a maintenance and equipment building in Manteo; $30,400 to build a new District Engineer's office in Rockingham; a similar structure at the same cost in Nashville; $42,000 for new maintenance building in Division 14; $124,600 in extra funds for constructing a Division 13 Shop (present building to be sold for $65,000); $9,300 for a maintenance headquarters building in Williamston; and $46,000 for a Repair Sub-Shop in Manteo.

An End To—"Sorry You Were Cut Out"

Relief is in sight for the sometimes hopeless traffic jam on the Highway Department's two high frequency radio circuits. The Federal Communications Commission of Washington will shortly allocate two additional radio channels for North Carolina highway transmissions and, in anticipation of the move, the Highway Commission has approved necessary funds for the switchover.

At its January session, the roads body approved a $173,600 allocation for the contract work to be handled by the General Electric Company. The conversion will call for an additional receiver to be placed in each mobile unit, elimination of tube-type equipment in favor of transistorized circuits and the establishment of separate channels for base to base and car to car transmissions.

Shorn of all its many technical aspects, the improvement will provide a special channel for base to base operation in the west and a different channel for base to base transmissions in the east. Mobile units will have a special channel restricted to car to car conversations and another channel for car to base operation.

The additional channels will be tabbed "C" and "D" and will be combined with existing channels as follows:

A—Car to Car only (state-wide)

B—Car to Base, Base to Car (state-wide)

C—Base to Base (Divisions 9-14)

D—Base to Base (Divisions 1-8)

Conversion to the new system will eventually allow for installation of an additional 100 units. It is estimated that the changeover will increase efficiency by 75% with the biggest improvement being the removal of base to base station operation from the channels used by the lower powered mobile units.

It will be necessary to reissue licenses for all operating stations after official approval of the new channels by the FCC. This approval is expected in the next 30-45 days.

It is expected that the General Electric conversion work will require around 16 to 18 weeks.

Right Of Way Needed

More Secondary Road Projects Are Dropped

Strange as it may seem, the Highway Department is having continued difficulty in securing free rights-of-way for paving and improvements to some Secondary Roads. At its January meeting the Commission deleted 29 improvement projects involving almost 40 miles of roadwork, all because the needed rights-of-way could not be obtained. At an earlier meeting in Fayetteville the Commission dropped more than 30 projects for the same reason.

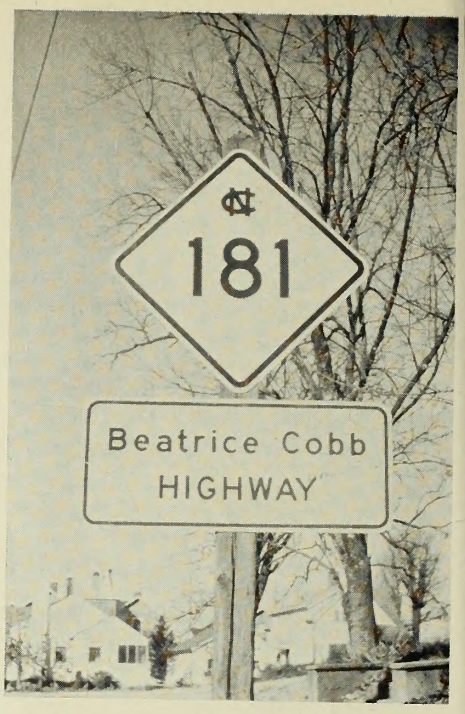
The Commission has had a long-standing policy of not paying for Secondary Road right-of-way unless it can be shown that construction of the road would actually damage property. In practically all cases such improvements along "farm-to-market" roads actually increase the value of adjacent land in addition to providing rural residents with better access to their homes and farms.

In some cases where there may be only one or a few property owners holding out on granting easements, the Commission will condemn the right-of-way if other property owners post bond or insure that they will take care of any condemnation costs. In several instances such bonds have been posted by willing owners just as a means of insuring the road work will be done.

In a recent letter to County Commission Chairmen, the Secondary Roads Department said the same policy applied where roads were to be added to the State System for maintenance. In all such cases a clear and unobstructed 60 foot right-of-way must be provided the Commission at no cost. In the same letter Secondary Roads Officer John Swain expressed appreciation to County Commissioners who have often assisted the Highway Department in securing cost-free easement for rural road work.

Tourist in New York to beatnik: "Can you tell me how I can get to Carnegie Hall?."

"Practice, man, practice."



Highway NC 181, from Morganton to Linville, has been named in honor of Miss Beatrice Cobb of Morganton. Miss Cobb, publisher of THE MORGANTON NEWS-HERALD and secretary of the North Carolina Press Association for many years, died last year. (Photo courtesy HICKORY DAILY RECORD)

Southern Route Selected For I-40

The Planning Board of the Highway Department has selected a southern route for Interstate 40, from the area of Hildebran to Conover, bypassing Hickory.

The route, as approved, would run slightly north of the existing US 64 and connect with sections at Conover and Hildebran.

The section of I-40 between Statesville and Conover has been completed to Interstate standards, while 35 miles from Hildebran to the Burke - McDowell County line is scheduled for opening this year.

Catawba County officials had requested the Highway Commission to consider the Hickory Bypass portion of I-40 slightly north of the finally-approved route. A public hearing was held on alternate proposals and it was determined that the northern route, which it was estimated would cost an additional $300,000, could not be justified.

Construction of the Hickory-Conover link is many months away but right of way acquisition may begin in a few months.

Bridge Tested To Determine Failure Point

Researchers and highway engineers alike were somewhat surprised, but also pleased, at the magnitude of load which an experimental secondary road bridge took recently before a definite structural failure could be confirmed.

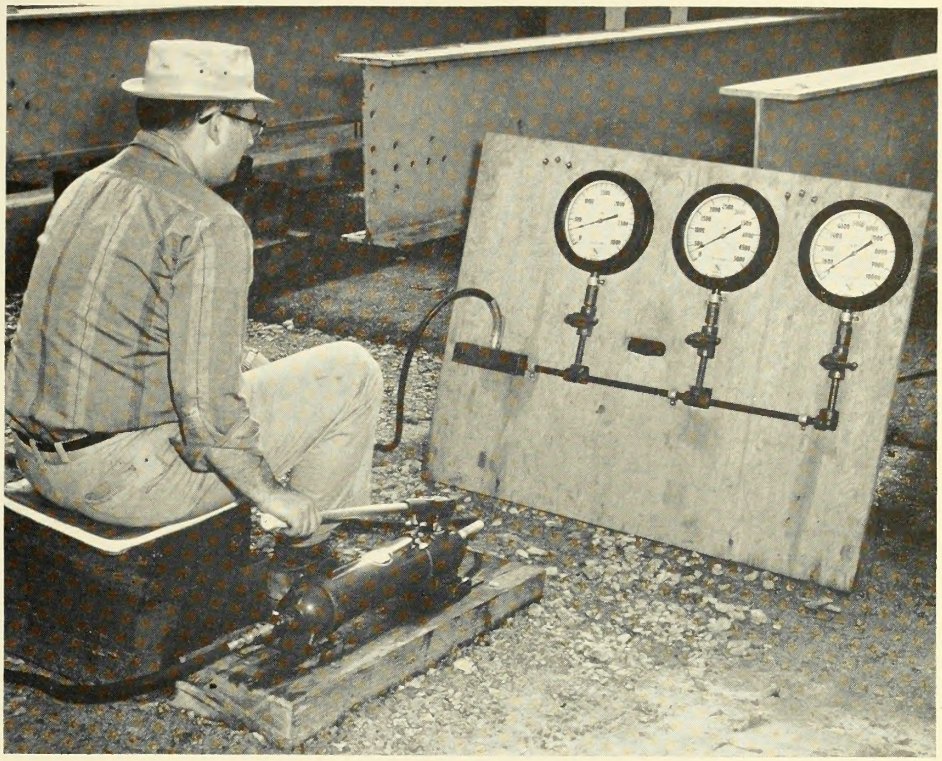
The research project is one of several being conducted by the Civil Engineering Department of North Carolina State College, under joint sponsorship of the State Highway Commission and the U. S. Bureau of Public Roads. The highway research program is under the general supervision of Professor C. R. McCullough.

The test bridge, 24 feet wide and spanning 30 feet, consisted of 10 prestressed, precast concrete "Double-Tee" beams. Final testing involved the application of loads to the bridge varying from zero to 320,000 lbs.

Though tiny hairline cracks appeared in the stems of some of the bridge members at lesser loads, it was not until a total weight of 320,000 lbs., or 6,100 lbs. per square inch, was applied that the bridge failed. The weight was applied at four points by hydraulic jacks which were spaced to simulate the rear axle loading of two trucks side by side. The test took the better part of three hours to complete and was conducted at the Raleigh Bridge Maintenance Yard before some 75 interested engineers, contractors and State College personnel.

To all intents and purposes, the bridge was typical of a number of prestressed concrete structures now being built on many of the State's rural secondary roads. Technical directors of the bridge research project, Professor C. R. Bramer and Dr. M. E. Uyanik of State College, stated that a complete analysis will be made before definite conclusions can be drawn from the test. The general concensus, however, was that the 10-beam bridge had undergone more stress than expected before ultimate failure occurred.

Total pressure was carefully measured by three pressure gauges, and the displacement of each of the 10 beams was measured under the varying loads. Previously, a single prestressed concrete beam of the type used in the bridge had been tested and found to fail at a total uniformly applied load of 34,500 lbs. One might expect, therefore, that 10 such beams would support 345,000 lbs. In the test of the bridge as a unit, however, the load was not uniformly applied over the width of the bridge, and it was therefore expected to fail at a load substantially less.



Left gauge indicated pressures up to 160,000 lbs.; middle gauge measured the load up to 268,000 lbs., while the gauge on the right indicated pressures up to the maximum applied—about 320,000 lbs.



Load application over 10 members of the prestressed concrete bridge was accomplished by jacking against steel beams with four hydraulic jacks. Because of the travel limitations of the jacks, it was necessary to release the load several times in order to add shims.

Highway Conference Set March 28-30 At State College

Plans are being finalized for the Third Annual Highway Conference to be held on the North Carolina State College campus in Raleigh on March 28, 29 and 30. This year's conference will bring together well over 300 highway men, contractor and supplier personnel for workshop sessions on contract specifications and construction procedures.

The three-day meeting will begin on Tuesday afternoon, March 28 after the regular highway letting, with a general session scheduled. The program calls for formation of eleven study groups which will meet simultaneously on the second day of the conference to probe into detailed problems of highway specifications and construction. Each study group will have a chairman and co-chairman from the Highway Department and/or the contractor-supplier field. These chairmen will report results of their discussion at a final general session of the conference. Several prominent speakers from North Carolina and other States will address the conference.

Topics for the group discussions include: Plans and special provision information for bidding purposes; plans and special provisions information for construction purposes; materials control and production of aggregates; bidding practices and contract administration; construction changes and claims; clearing grading, subgrade and base construction; shoulders, structures, curb and gutters and guardrails; bituminous bases and pavements; concrete bases and pavements; drainage features and culverts; and landscaping and fencing.

Included among highway employees invited to participate in the Conference are Division and Assistant Division Engineers, Resident and several Assistant Resident Engineers, inspectors and a group of engineers from the Raleigh office and the Bureau of Public Roads.

The list of major speakers was being prepared at the time of ROADWAYS publication and was not available.

Policy On Gifts, Outside Work

At its January 31 meeting, the Highway Commission adopted the following policy governing receipt of gifts and outside employment of State Highway Commission employees.

GIFTS

1. Employees of the North Carolina State Highway Commission shall, under no circumstances, solicit or accept monetary gifts or loans from individuals, representatives, firms, partnerships, companies or associations doing business or soliciting business or desiring to do business with the State Highway Commission. Employees shall not accept gifts, gratuities, entertainment, or favors from such outside interests, the only exception being incidentals which are obviously and clearly of an advertising nature, receipt of which would in no way cause the employee or the State Highway Commission to be obligated or in any way embarrassed.

2. On certain occasions such as a conference or group meeting where a number of employees may be invited as guests and where their attendance would be in furtherance of the Commission's interest; or where an individual employee is serving as an official representative of the Commission, such occasions may be authorized by the Director of Highways.

OUTSIDE EMPLOYMENT

3. No employee of the North Carolina State Highway Department may accept gainful outside employment which would result directly or indirectly in a conflict of interests, or would in any way compromise the position of the individual or the State Highway Commision with firms doing business or desiring to do business with the State Highway Commission.

4. No employee of the North Carolina State Highway Department may be engaged in any gainful outside employment when such employment affects in any way the normal competency of the individual in the regular performance of his job responsibilities with the State Highway Department.

5. Employees of the North Carolina State Highway Department may accept gainful outside employment to be performed in regular off-duty hours, but only where such employment involves no direct or indirect conflict of interests, and only where permission for such employment has been granted by the employee's Division Engineer or appropriate Department Head. Such permission by Department Head or Division Engineer to be granted in writing to the employee with copy to the Director of Highways. This letter of approval shall contain the name of the employer, the type of work to be performed by the employee, the approximate number of weekly working hours, with the stipulation that the employee may not be called off his regular Highway Department job during working hours for the performance of any outside work. Further, no leave of absence may be granted to the Highway employee for the purpose of outside employment under any circumstances.

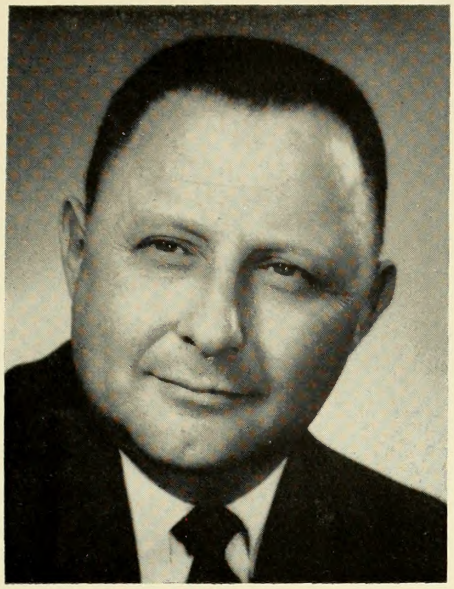
Fed. Aid Apportionments Increased 6 to 7 Million

North Carolina's share of Federal Aid apportionments for work on the Interstate System will be increased next year by approximately 6 to 7 million dollars, according to figures which have been released to Congress.

During the past two years, North Carolina's share in these apportionments was approximately 54%, but when new estimates were prepared by the various States, based on a needs formula, the State's share was increased to .826%.

This means that instead of the $11,000,000 which North Carolina received the past two years for Interstate work, apportionments will be closer to $17,000,000 or $18,000,000 a year for the next four years.

Recent estimates show that $25,461,000,000 will be needed to complete the 41,000 mile network of superhighways. Of this, North Carolina will need $210,349,000 to complete its 775-mile share of the system.



From The Director's Office

Dear Fellow Employees:

At its January 31 meeting, the State Highway Commission formally adopted two policies regarding employee activities—one in connection with gifts from commercial firms, and the other concerning outside work of highway employees. I want to emphasize that these policies, which are quoted in full in this issue of ROADWAYS on the opposite page, were not adopted because of any particular incident, nor are they directed at the activities of any one individual. In fact, they are merely re-statements of commonly-understood principles which have generally guided us over many years. Our Commission simply felt that it would be helpful to repeat these policies as a means of keeping them fresh in our minds.

In some cases, our employees have received gifts from commercial firms which supply services or materials to the Commission. While these gifts are almost always presented as merely a gesture of friendship, and without the prior knowledge of the employee, our Commission feels the practice should be discontinued, or certainly limited to items which are clearly of only a token or advertising nature. In order that everyone may be completely familiar with the Commission policy, it has been made available to the many commercial firms doing business with the Commission. To my knowledge, there has been no case where the Highway Commission or any highway employee has been compromised. Indeed, our Commission has been blessed with a very fine record, clear of blemishes, and I know that commercial firms as well as highway employees, want to preserve that record.

There are several examples of highway employees accepting and performing outside work at no sacrifice to their highway job, and without a conflict of interest in any way. The policy on outside employment is not intended to limit such activities, but our Commission does feel that such employment should not continue or be accepted in the future without clearance from the appropriate Department Head or Division Engineer. Both he and my office should know the nature and extent of such outside work and should approve it so that no question will be raised or misunderstandings develop.

It is our feeling that both these policies reflect good business practices for all public servants engaged in our large and important highway activity, and I know we can count on all of you to understand the spirit in which they were adopted and to cooperate fully with us in carrying them out.

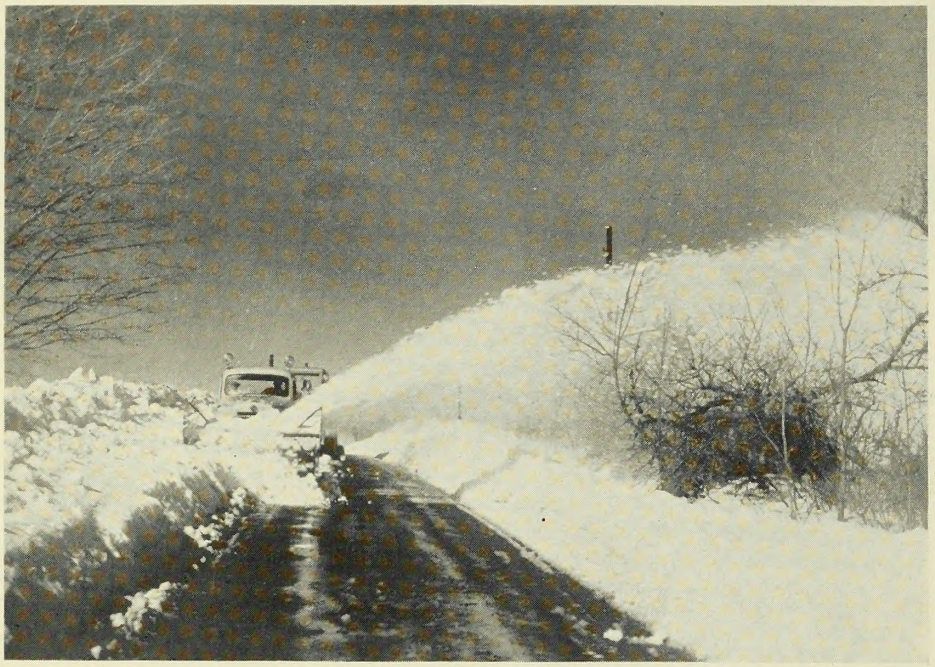
Sincerely yours,

W. F. Babcock.

W. F. BABCOCK

New Snow Removal Equipment Purchased By Hw'y Department

The Highway Department recently purchased two new pieces of snow removal equipment, to be used in the northwestern section of the state, which was buried under heavy snows last winter.



The SNOGO at work on N. Y. Highway

Unlike the conventional snow plow, the new SNOGO does just what its name implies. In addition to clearing a snow-covered road, this new snow remover also blows the snow to the roadside. Instead of pushing the snow along as a regular snow plow does, the SNOGO pulls the snow in through rotors on the front of the vehicle, then blows it back to the side of the road. The operator may control the snow stream direction by means of a hydraulic control lever inside the cab of the truck. The direction is instantly adjustable to discharge to either side and to any desired angle of discharge through an arc of 160 degrees. The snow stream direction or elevation can be instantly changed without stopping or interrupting the operation.

The SNOGO can move into snow banks as high as 8 to 10 feet and blow the snow to the roadside. Last winter, when many areas in northwest North Carolina were blanketed with as much as 72 inches of snow, it was necessary to use front end loaders to pick up the snow, then dump it in waiting trucks and haul it away, since the snow plows could make little progress where there was heavy accumulation on the road.

(Continued on inside back cover)

Thanks,

For Leaving Snow On Our Road

During the recent snows, when there were thousands of people who were anxious to get the white stuff cleared out of their way, there was at least one person who DIDN'T want the snow removed.

We are reprinting below a letter which was received by Division Engineer J. W. Jenkins of Durham:

"Some weeks ago at the height of the snow storm, when you were busy with important matters, I took the liberty of calling your office to request that the snow plows not be used on Cornwall Road, explaining that our driveways were the only ones opening on that hill and that the children used it for sledding. You were most cordial and cooperative and I more than appreciated the courteous way you handled our request.

"The children had a wonderful time. No one was inconvenienced, and I want to thank you, not only for not cleaning off the hill, but for courtesy and understanding you showed during a busy time.

"I should have written to you earlier. Last evening I saw the attached cartoon which I thought you and those in your department would enjoy seeing. I am quite certain if children in our neighborhood saw it they would call that man on the back of that truck Mr. Jenkins."

Signed,
Lenox D. Baker, M. D.



"Bill, I just don't have what it takes."

N. C. S. H. P. E. A. Association News

VOLUME 10—EDITION 3 MARCH-APRIL

CORRECTION—Article in last issue of ROADWAYS quoted premium rate on retired life coverage at $1.00 per $1,000 per month; should have been $1.10—the experience figures were for the period ending September 30, 1960. Please pardon my error.

SPECIAL REPORT—At the 15th annual convention of our Association, the Insurance Committee reported on the status of our Group Insurance Program. It was the recommendation of the Committee, as well as the convention, that our program continue with Connecticut General without change. We believe our plan is a good one and that the benefits (life insurance, accidental loss of life, limb or sight insurance, weekly payments for accident and sickness, hospital-surgical-medical) offer each of us and our families excellent protection.

All of our benefits undergo constant study to make sure that they are adequate and so that some area of the plan does not create a situation which would endanger our overall Group Insurance Program. At recent meetings with the Insurance Committee and Connecticut General Life Insurance Company, we have been giving very careful consideration to two areas which have been under study for some time—Life insurance for retired employees and our Accident and Sickness Program, or income replacement.

1) Life Insurance for Retired Employees

Simply stated, in the past two years the premium paid by retired employees is not anywhere adequate to support the amount paid to beneficiaries in death claims. As a matter of fact, last year we paid out almost 6 times as much as as we took in. The additional money to make up this difference is being paid from funds from the entire membership. Therefore, we plan to determine: what steps should we take to protect the overall Group Insurance Program, and when these steps should be taken.

2) Accident and Sickness Weekly Payments

In this area, we are primarily interested in making the best possible use of our insurance dollars. This benefit has also evidenced sharply increasing claim payments when compared to the premiums for this protection. This means we have to study how long these claims are running, what age groups are benefitting the most and why, and other claim reviews. We plan to work jointly with the Insurance Company to get information in order to make the right decision for all involved. This will not only involve statistics, but actual review of claims paid or claims in process. These are your dollars being spent, and your investment can be protected by careful analysis of all claims.

Our intention is to keep you advised on a regular basis as to our progress. With time and adequate information, we believe you can help not only your Insurance Committee but the Insurance Company reach a fair and workable solution to these extremely important matters.

EXPERIENCE for period from 10/1/60 to 1/1/61, as reviewed by the Insurance Committee on February 2, indicated a return of 110.3% on active Life and 569.1% on retired life, or a total return on Life of 140.5% of premium paid; combined casualty (hospital, etc.) showed a return of 84.0%; death and disemberment was 110.3%. The entire program showed a combined total return to us of 102.2% of premiums paid, without any compensation to the Company and no addition to reserves or no payments of State Premium Taxes. Our reserve balance now stands at minus $8,000. These figures frighten us.

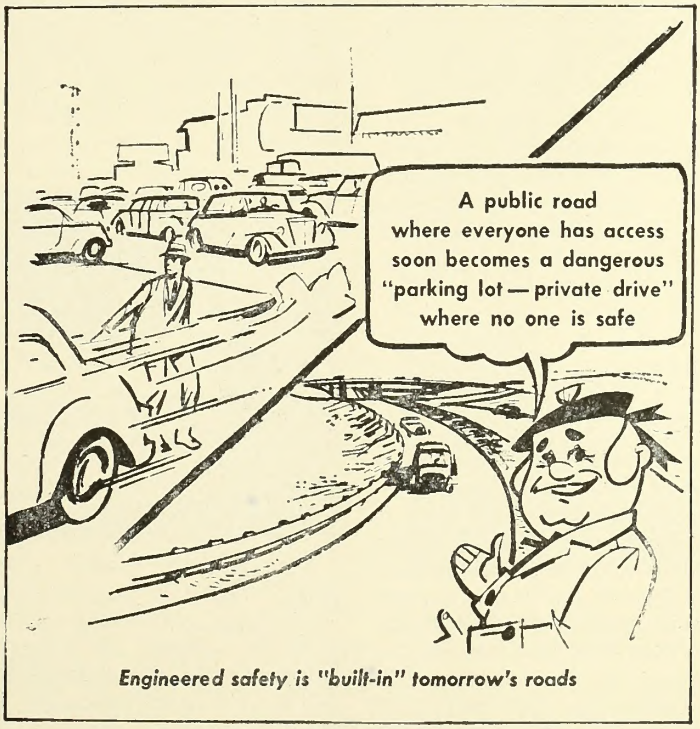
THE CONTRACT is now on a reimbursible basis, or reimbursement to the claimant of costs paid by him up to maximum allowances. Consequently, payments of daily room allowance for confinement in VA Hospitals, where no charge is made to the patient for such, are to be discontinued. Field forces will have been advised of this by Mr. Dixon, Controller, by the time you read this.

DO YOU KNOW that treatment of fractures and dislocations is covered in the surgical schedule in your Group Insurance Plan? It certainly is—review your booklet for amounts payable.

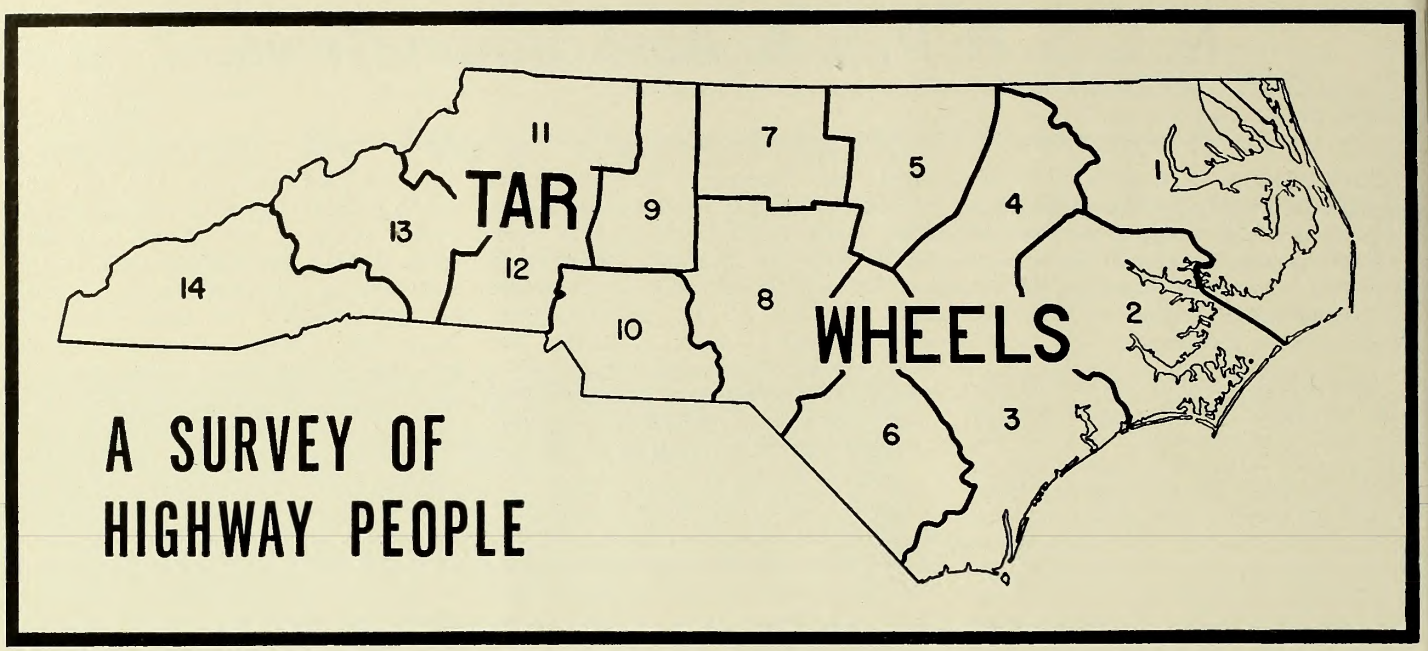
Otis Banks, Secretary

"CONNIE" MacAdam

by Mark Blake



Engineered safety is "built-in" tomorrow's roads



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

ADVANCE PLANNING—*J. M. Greenhill* and *W. H. Riggs* attended a recent short course on urban planning sponsored by the Institute of Government at Chapel Hill. Participants in an urban planning seminar sponsored by AASHO in Chapel Hill, Feb. 6, 7 and 8 were: *George Stephens*, *Billy Rose* and *R. J. Kimley*. *Jim Prince* also attended the seminar. Mrs. *Cleo Brewer* has transferred to the Chairman's office as a steno. Good luck to *James R. Davis* who recently left the Department to accept a position with Western Electric in Burlington.

DIRECTOR'S OFFICE—It's nice to have Mrs. *Mary Tripp* as a new steno in the Director's Office. Mary transferred from the Key Punch Section of Accounting Feb. 20. Originally from New Jersey, she and her husband, Herb, live in Oakwood Heights, Cary.

ACCOUNTING—Employees reported a good time by all at a gay Valentine party in Knightdale, Feb. 17. New faces in the department are: *Judy Upchurch*, *William Rollins*, *Charles Baker* and *Robert Fleming*. *Charles Tesh* resigned to move to Greensboro. It's nice to have *Helda Ray* back at work after a siege of pneumonia. Mrs. *Barbara Edwards'* daughter, Vickie, is recuperating from an eye operation. Employees were glad to see Joe Belvin who paid the Department a visit recently. Joe retired in December, 1959, after chalking up 35 years' service with the Commission.

ROADWAY—Our sympathy to *T. G. Moody* upon the recent death of his brother. *Ralph F. Owens* and *Forest Adkins* are new additions to the staff in Roadway Drafting. *R. D. Turner* vacationed in sunny Florida for ten days the middle of February. Congratulations to *Thomas Walkup* who was married March 18 in the Methodist Church of Auburn, Alabama to the former Miss Ophelia Jones. Tommy is a Draftsman in the Roadway Design Drafting Room. The Department welcomes *Aaron M. Kreem* as a new Roadway Design Engineer. Kreem is a Civil Engineering graduate of Northeastern University in Boston, Mass., and prior to his present position was employed with Howard, Needles, Tammen and Bergendoff, Engineering Consultants, in Orlando, Florida. He also is a former employee of the Florida State Highway Department.



PROOF OF THE CATCH! Nine plump shad were caught by John Swain and friends on the St. John's River near Sanford, Florida on John's two-week vacation to Florida in February. Weighing in at 2 to 3½ lbs. each, he reports they provided a tasty treat. And—they were all caught by hook!

PHOTOGRAMMETRY — New faces in the department are: *Guillermo Vidaud* of Havana, Cuba; *Bill C. Parker* of Asheville and *Wayne Robey* of Alexandria, Virginia. Vidaud and his family are former residents of Havana, Cuba, where he was employed as an architect and teacher following graduation from the University of Havana. Due to the current political crisis existing today in Cuba, he and his family left their country to take up residence in the U. S. Employed as a Draftsman, the Vidaud's new home is Cameron Village. Parker moved to Raleigh in 1959 to attend State College. Married and the father of three children, Parker is employed as a Photogrammetric Aide II, and is continuing his studies in Civil Engineering through evening classes at State. Robey, new lab technician and currently training as aerial photographer, previously spent four years in the Navy where he studied Electronics. He has been a North Carolina resident for the past two years. Good luck to *Charles Watson*, who recently resigned to resume his studies at N. C. State College.

TRAFFIC ENGINEERING—Congratulations to the *Pete Deavers* upon the birth Jan. 2 of their second boy, Timmothy Kurt; and to the *Robert Dodges* upon the birth Dec. 17, of a third son, David Williams.

SECONDARY ROADS — Department Head *John Swain* reported a wonderful time golfing and fishing on his two-weeks vacation the middle of February in Orlando, Florida. And he's sporting an early suntan, too!

PLANNING—Welcome to *John E. Kreiner*, a new Research Assistant in Mr. Jay's Office. (Mapping Section) It's nice to have *David M. Young* of Asheville as a new draftsman. A graduate of Clemson College, he recently married the former Martha Jane Reynolds of Tryon. Our sympathy goes out to *Barbara Thore* upon the recent death of her grandfather. Congratulations to *Larry Wallace*, who recently took as his bride, the former Miss Gloria Bryant of Roanoke Rapids.

BRIDGE MAINTENANCE—*Ruby Jones* recently took some time off to vacation with her brother and his family in Florida. Congratulations to *Kay Satterwhite*, former steno in the department, and her husband who are the proud parents of a baby boy, born Dec. 20.

LANDSCAPE—*F. H. Brant* attended the Highway Research Board Meeting in Washington, D. C., January 8-13, and also the Virginia Landscape Short Course at Richmond, February 15-17. At each of the meetings, he presented a paper dealing with mulching practices and materials used in roadside erosion control work. *Worth Sorrell* reported a grand time in Washington, D. C., for four days during January, when he went up for the Democratic Presidential Inauguration.

RIGHT OF WAY—*Bill Cherkas* transferred to Traffic Engineering. Welcome to *Bobby Heath* of Wade, who recently joined the department as a R/W Aide and permanent assistant to Mr. Gibbs; and to *Ronald Thompson*, a former employee of the Virginia State Highway Commission, from Staunton, Va., who is in the Appraisal Section. One of the R/W employees (who prefers anonymity) had his car stolen recently while refereeing a basketball game. *George Willoughby*, Administrative Assistant in Secondary Roads, lost his London Fog raincoat in the crime. It is reported he grieved for several days over his tragic loss. Our heartfelt sympathy to Department Head *W. H. Webb* upon the recent loss of his beloved wife, Margaret; to *Billie Hardison* on the death of his father, William Hardison of Walstonburg, N. C., and to *John A. Holmes, Jr.*, upon the recent loss of his father, John A. Holmes of Edenton, N. C.

SAFETY—It's nice to have Mrs. *Gloria Anderson* as a new steno in Safety. Gloria is the wife of Sgt. H. L. Anderson with the U. S. Army and has two daughters, Linda and Peggy. Reports are that Mrs. Becki Brenner, former secretary to Mr. Jones, now lives way out west in Houston, Texas. Becki is bookkeeper with a dental firm, reports she owns a brand new car and has become a flaming redhead—and at this writing—has lost 40 lbs. For those who may wish to drop Becki a line, her address is: Mrs. Becki Brenner, 505 Twin Oaks, Houston, Texas.

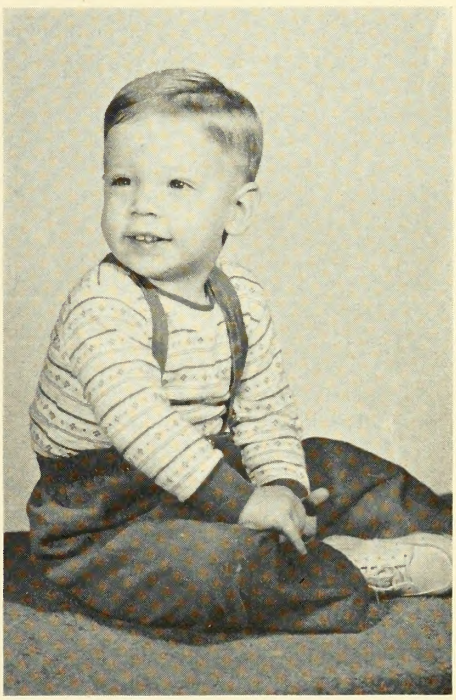


Key punch operator Mary Turner is shown with the money tree which grew in the Finance Section recently. Mary supervised the collection of more than $100, which was presented to the family of little Keith Inman, victim of an incurable brain disease. The lovely arrangement of flowers was donated by Art Flower Shop of Raleigh.

MATERIALS & TESTS—Congratulations to *Marie* and Al *King* upon the birth of a baby boy, Feb. 20, in the Fuquay Springs Hospital. While Marie is on maternity leave, Mrs. *Anita Williams* is filling in for her. Our sympathy to *J. E. Thompson* upon the recent loss of his mother. Fellow employees were shocked and saddened to lose *Charles Craig Todd*, 52, who died Feb. 17 in Rex Hospital from a heart attack. Funeral services were held at Brown-Wynn Funeral Home and burial was in Montlawn, with the Rev. Charles Lynn Brown officiating. Employed with the Department as a Soils Investigator, Charles had been with the Commission for 20 years. Our deepest sympathy to his family.

BRIDGE—Best wishes to *Mary Lewis* who resigned to join her serviceman husband, who recently returned to the U. S. They will be stationed in Altus, Oklahoma. *Connie Mitchell* transferred from the Permit Department as Mary's replacement. New faces in the department are: *William Kenneth Creech, Nathan Benson, Ned Chapman, Pat Thompson* and *Mike Dawkins*. Recent transfers are: *Sam Usry*, who transferred as Bridge Construction Engineer to Hickory; *Max Collins* from Bridge Maintenance to Bridge Construction; *Felton Lowman*, trainee; *Terry Blankenship*, trainee, to Durham with Right of Way; and *F. W. Adkins*, trainee, to Roadway. Employees in Bridge Drafting were pleased to have a recent surprise visit from *Ike Bobbitt*, who left the Department early last year to accept a job in Lakeland, Florida. *Gerald Stone* recently moved his family from Durham to Raleigh. *Jack Parker* reports he had seven cases of mumps in his family—and—he was the last one on the list to catch it. Oh well, better late than never, eh Jack? *W. S. Winslow* and *J. L. Norris* attended a meeting of the Highway Research Board in Washington, D. C. during January. Congratulations to *Max A. Head* who was married Dec. 16 in Glendale Springs Presbyterian Church, Glendale Springs, N. C., to the former Miss Joan Bare. New employees in Bridge Location are: *J. J. Edgerton, T. E. Harrell, Jr.*, and *Ned M. Perry*.

LOCATION—New faces in the department are: *Kenneth E. Brigman, W. C. Burgess, Richard Higgins, Joe Jones, Paul Lynch, Marshall McDonald, James McRacken, Stanley Patelos, Roger L. Rodemaker*, and *Gerald A. Sawyer*, all engineering aide 1's; *James Hodges*, Highway Engineer I, and *Ray Warren*, EA 2. A quick recovery is wished *Boyce Midgette's* father, who is a patient in De



This cute little two-year old with the sunny smile is Robert Lynn Smith.

His parents are Mr. and Mrs. Bob Smith of Cary. Dad is Personnel Assistant with the Highway Commission.

Paul Hospital, Norfolk, Va. Sympathy is extended to *Herbert Chappell*, who recently lost his mother. Congratulations to *A. C. Dodson* upon his recent appointment to the Landslides Investigating Committee of the Highway Research Board. *J. P. McElrath* and *A. C. Dodson* attended the 11th Annual Symposium on Geology as applied to Highway Engineering in Knoxville, Tennessee the weekend of Feb. 10. They reported a very successful meeting. *Chester Gray, Richard Pawlikowski* and *Frank Daino* are members of Hackney's Bowling Team in the Night Owl League. Best of luck on the upcoming State Bowling Tournament, boys! *Edgar Page* and *Lloyd Cook* paid a recent visit to the Virginia Department of Photogrammetry for conference with the Virginia Highway officials to study their Photogrammetric operations. *Boyce Midgette* is excited about moving into his new seven-room home in Forest Hills, Garner. His new street adress is 1311 Vandora Avenue for those of you who wish to help him celebrate!

FEDERAL CONTACT—*Elizabeth* and *John Wiggins* were participants in the chorus of the Cary Exchange Club's minstrel, Feb. 24-25. And they did real good, too!

COMPENSATION — Members of the staff were pleased to have retired Department Head H. K. Witherspoon drop by recently for a chat.

REPRODUCTION—The boys in Reproduction are sorry the hunting season is over; however, they are looking forward to boating, fishing, and water-skiing as soon as the first warm days of spring occur. Ardent ski-fans are *Earl Williams, Raymond Jones, Garland Mitchell, Charles Lassiter* and *Paul Pearson.*

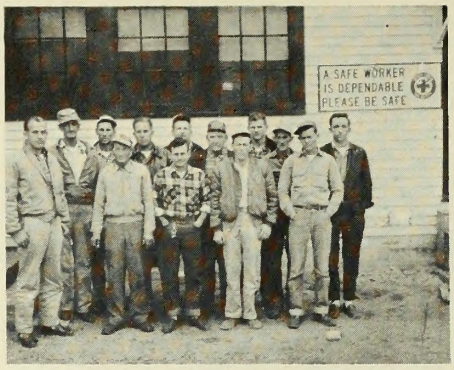
LEGAL—Get well wishes are extended to *Alda Doby*, steno in the department, who was recently injured in an automobile accident. *Harrison Lewis, Millard Rich*, and *James F. Bullock* attended the Third Annual Institute on Eminent Domain March 9-10 in Dallas, Texas.

DIVISION ONE

By ROY E. WEST

Division Correspondent

THE STORK REPORT this time lists quite a few new arrivals. Mr. and Mrs. *Linwood L. Rawls* are proud of their first daughter, Deborah Lynn. Also, the *P. E. Sawyers, Elwood Tolsons* and *G. K. Riddicks* have additions to their families.



Here is a group of Division 1 employees who attended the Equipment Operation and Care School conducted at Buxton by E. P. Priest, far left.

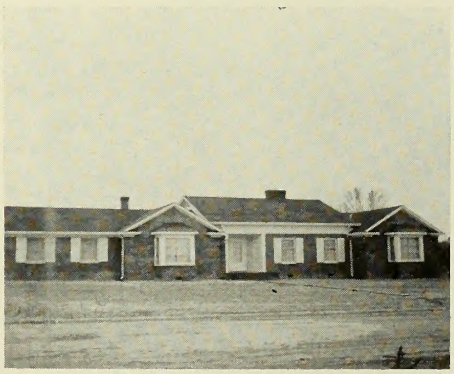
Mr. and Mrs. *Delmar Willis* of Buxton are the proud parents of twins, a boy and a girl, and Machine Operator and Mrs. *J. E. Evans* announce the birth of a son.

THE NEW CAR BUG has caught up with Maintenance Supervisor *Robert Vinson*, who is sporting a new Dodge, and Equipment Superintendent *W. J. Davis*, who is enjoying his new Chevy.

AT LEAST one of our number could be seen at the Inauguration in Washington. Prison Supervisor *R. L. Turner* made the journey to the Nation's Capital for the occasion.

THE SUNSHINE STATE of Florida was the vacation spot chosen by Assistant Division Engineer and Mrs. *E. H. Baggs*, as well as Bridge Tender *D. T. Baker* and Mechanic *Jay Smith*, with Jay reportedly "catching up" on his fishing.

CONGRATULATIONS to Robert C. Vanderberry, Jr., son of Mrs. *Nedra M. Vanderberry*, stenographer in the District 2 office, who has been notified of his appointment by Congressman Herbert Bonner as an alternate candidate to the United States Naval Academy. Robert is a senior at Ahoskie High School. Best wishes also to Truck Driver *Richard Stallings* of Pasquotank County, who resigned to operate a service station and invites all his friends to stop by.



Here is the lovely new home which was occupied recently by Mr. and Mrs. Lockwood Peele. The home is located on Circle Drive in Ahoskie. Mrs. Peele is a stenographer in the Division One office.

OUR SYMPATHY is extended to the families of *Bill Cherry* and *Roy E. Peele*. A long-time employee, Mr. Cherry died after an extended illness. Peele was accidentally killed while working with the Road Oil Department plant mix asphalt crew laying asphalt on Hatteras Island. Our sympathy goes out also to *E. G. Legget* and *G. W. Lee* in the death of their fathers.

GET WELL WISHES are extended to all who have been sick recently and we hope many are fully recovered by the time you read this. *E. L. Doxey* has been confined to his home due to a case of the flu. Ferry Pilot *F. L. Peele* of Hatteras is confined to Marine Hospital at Norfolk; Deckhand *C. A. Jones* of Manns Harbor was hospitalized with a knee injury; *W. C. Johnson* of Pasquotank County is reported recuperating after recent surgery; Deckhand *Clyde Austin* of Hatteras underwent surgery at a Norfolk hospital; Bridge Tender *Lofton Dail* of Hertford fell on the ice and broke his shoulder, but is back at work now. *R. M. Saunders*, Chief of the Locating Party in Elizabeth City District Office has been confined to the Albemarle Hospital for treatment but is now at home. Resident Engineer *W. M. Smith* has returned to work after a 10-week illness, and *M. L. Lawrence* of the Construction Department is convalescing



Presenting Lisa Ann Sellars, charming daughter of Mr. and Mrs. J. O. Sellars. Her dad works with the Right of Way Department in Division 1.

at home following recent surgery. Back at work after illness are *Willie E. Long, J. L. Scott, D. H. Keel, Howell Warren* and *H. T. Liverman. T. B. Ray* is a surgical patient at Roanoke Chowan Hospital. A speedy recovery is wished for *J. E. Phelps, A. D. Castellow, R. M. Reynolds, F. L. Simmons* and *J. H. Taylor*, who are still sick.

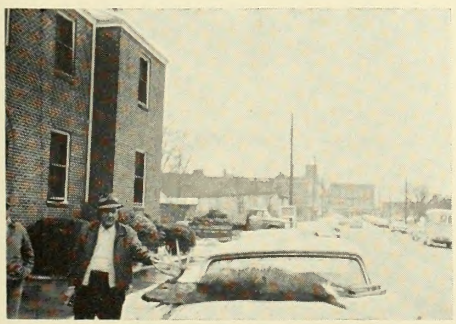
THE SCHOOL for Truck Drivers was attended by *E. B. Priest, Lee Battle* and *W. F. Ange*, who are now conducting schools in their districts. Those attending the Concrete School in Raleigh include *R. J. West, S. D. Overton* and *J. G. Harrell, Jr.*, inspectors with the Construction Department with headquarters at Gaston.

BEST WISHES to the following who have received promotions: *Alice Norville, Stella Windom, E. L. Doxey, Hurley Hofler* and *Howard Bray*. Good luck is wished for Maintenance Yard Assistant *G. R. Green* and Truck Driver *P. N. Pedrick*, who have retired on disability. At the same time, we welcome *Richard W. Feher* of Ahoskie, new mechanic at the Union Equipment Shop. He formerly worked with the Charles H. Jenkins Company of Ahoskie. *Alvin Hall*, inspector of the Elizabeth City construction office, has been transferred to work on the Alligator River Bridge with headquarters in Columbia.

BARBECUED CHICKEN, prepared by *"Cad" Newbern*, was on the menu for a recent party held by the Equipment Department. *W. J. Davis*, Equipment Superintendent, presented *W. J. "Bud" Harrell* and *P. L. Moore* with farewell gifts as they retired.

A FIRST AID training course has been completed by the employees in District 3. *W. E. Moore* and *J. A. Stalls* conducted the course.

RECENT GUESTS in Winston-Salem were District Equipment Mechanic and Mrs. *M. C. Newbern*, who visited their son-in-law and daughter, Dr. and Mrs. Ralph Breshaer and family. District Engineer and Mrs. *T. C. Liverman* were recent guests of their son-in-law and daughter in Plymouth. *L. D. Webb, M. R. Conner* and *J. O. Sellars* attended the funeral of John Holmes, Sr., father of the office administrator in the Right of Way Department.



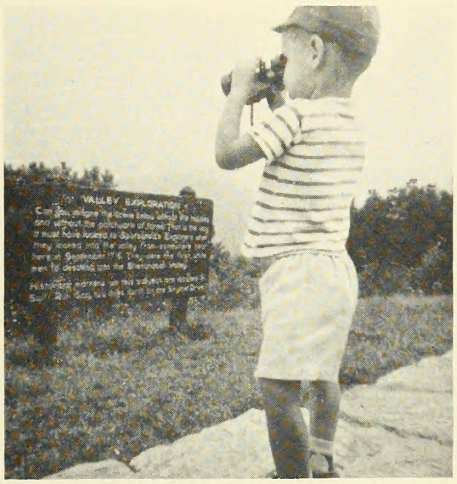
District Engineer T. C. Liverman of Division One killed this 10-point buck recently. His weapon—a 1958 Chevrolet.

DIVISION TWO

By ROY D. FRANKS

Division Correspondent

THE WELCOME MAT is rolled out for *W. J. Mizell* and *J. T. Jackson*, mechanics in the Division Shop, and for *J. B. Bowden* of Wilmington, who replaces *J. F. Permenter* as Equipment Inspector. Everyone is going to miss Mr. Permenter, whose official business takes him out of our Division.



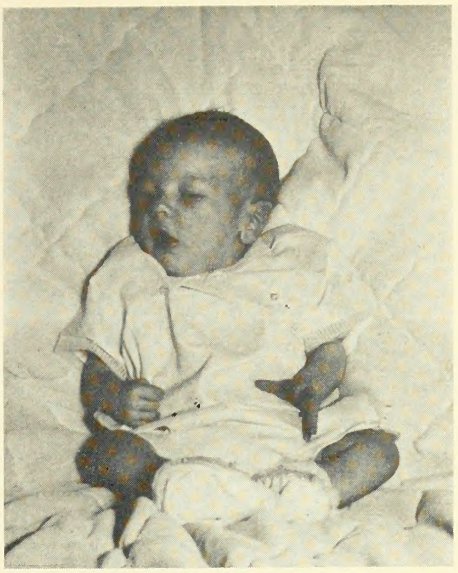
Young Mike Smith, son of W. K. Smith, Mechanic at the Division Two Shop in Greenville, wants a "good look" at the scenic beauty along the Skyline Drive.

OUR SYMPATHY is extended to *Miss Anne Askew*, in the recent death of her mother.

CONGRATULATIONS go to Mr. and Mrs. *Elbert J. Stokes* in the birth of a son, Jack DeWayne. Mr. Stokes is with the Construction Department at Washington.

SUNNY FLORIDA was the recent destination of the *E. L. Tripps*, who report a delightful vacation.

WELCOME BACK TO WORK, *Vernon B. Carawan*, Maintenance Employee, who underwent surgery recently at Pitt Memorial Hospital; and Road Oil Supervisor *L. L. Bishop*, who was hospitalized recently. Others who have been on the sick list include: *H. L. Briley*, who suffered a broken rib; *J. R. Wilson*, surgical patient at Beaufort County Hospital, and *O. S. Denby* and *C. L. Gray*.



Little Christopher Ivan Cannon takes a dim view of picture-taking. He's the son of Mr. and Mrs. William D. Cannon. Christopher, whose daddy works in the Division Two Sign Department, was born December 22.

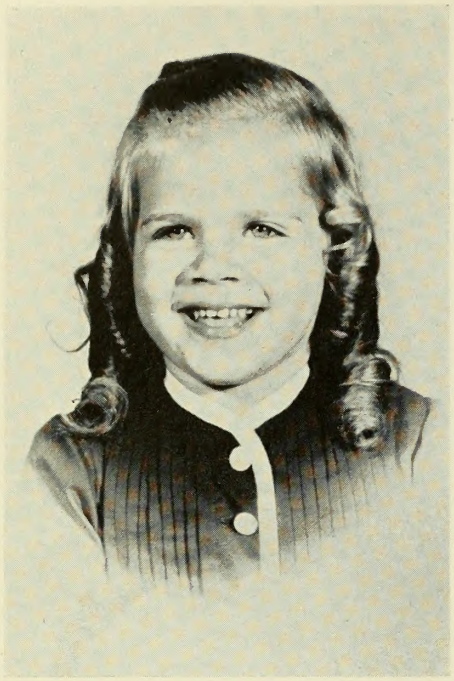
DIVISION THREE

By IRENE C. HEWETT

Division Correspondent

THE STORK has been pretty busy in our Right of Way Department. Congratulations are in order for Mr. and Mrs. *Owen Bessellieu*, on the birth of a son, Anthony Owen, January 5. They also have a little girl. It's a girl for the *Carl Dennis Parkers*. Their first child, Annette Denise, was born February 4.

A FEW people have been taking winter vacations. Mr. and Mrs. *T. J. McKim* went by train to Lawrenceburg, Indiana, to visit his mother, who is 88 years young. They also got to see some of his other relatives and friends they hadn't seen in quite some time. Mr. and Mrs. *W. C. Cooper* headed south, to sunny Florida, where they visited his brother at Palatka, then toured Ocala, Daytona Beach and St. Augustine. Mrs. *Minnie Mae Smith*, secretary in the District 2 office at Clinton, has returned from Grosse Pointe Woods, Michigan, where she visited her son-in-law, daughter and family and saw her new grandson for the first time.



This young lady is Susan Anne Hewett, three and a half year old daughter of Mrs. Irene C. Hewett, secretary to the Office Engineer at Wilmington, and Division 3 correspondent for ROADWAYS.

A NEW OFFICE is the reason for Road Oil Supervisor *C. C. Parker's* bright smile. A new desk makes it all complete. We know the Road Oil Department will enjoy their new headquarters.

GOOD LUCK to *S. D. Carr*, who has resigned to return to farming, and to *Roy Ball* and *E. O. Cowan*, who retired at the end of the year. District Engineer *N. S. Day* recently presented certificates to *Leo Batson* and *H. T. Wooten*, who are on service retirement. A welcome is extended to *Wayland J. Balkcum*, mechanic in the Equipment Department at Clinton.

WE HOPE *Carl Lee Mintz*, who is out sick, will soon be well and able to return to work. *Frank Watson* of the Construction Department has been very sick at Cape Fear Hospital. Hope he'll be back soon. *A. C. Bond* of the Equipment Department is reported on the mend and we hope to have him back soon. It is good to have *E. L. Starling* back after several weeks illness.

WE EXTEND our deepest sympathy to Mrs. *R. V. Biberstein*, wife of our Assistant Division Engineer, in the loss of her mother; and to *Joe Bannerman*, Office Engineer, in the death of his brother, as well as to the family of *R. O. Lewis*, retired Maintenance Department employee.

EQUIPMENT Care and Operation Schools have been conducted in Wilmington and Clinton, under the leadership of *R. T. West* and *D. A. Naylor*.

LAST, but not least, we are glad to have *J. D. Gainey* back with the Roal Oil Department after absence due to an on-the-job injury.

DIVISION FOUR

By JERRY BOYKIN

Division Correspondent

A RED CROSS refresher course was held in District Two, with the following persons taking part: *M. T. Batchelor, R. C. Bunn, W. N. Dorsey, P. A. Fulghum, J. V. Kemp, E. C. Mercer, V. B. Moore, Fletcher Price, R. C. Wallace, W. T. Williams, Z. H. Williams* and *C. F. Williams*. Instructors were *Kenneth Gay* and *M. P. Yount*.

WELCOME to *Preston Lane*, his wife Rebecca and daughter Debbie, who have moved to Roanoke Rapids from Saratoga following his assignment to the District Office in Weldon. *Braxton Wood* and wife Zelda and their three children have moved to Weldon from Smithfield. He is working with the Resident Engineer on the I-95 construction in the area.



Pretty Patsy Sue Johnson, daughter of the C. M. Johnsons of Wilmington, recently celebrated her third birthday. Her daddy has been with the Equipment Department for over 10 years.

THE FLU BUG hit the Division Office, with *Layton Tart, D. B. McMichael* and *Jerry Boykin* among the victims. Others who have been on the sick list include: *A. A. Taylor, J. W. VanLandingham, J. W. Carter, W. E. Wagner, Z. E. Mohorn, Josh Webb, C. W. Little*, Mrs. Leila Cooper , wife of *J. E. Cooper; Elmer Everette's* daughter Nancy; Ruth Ann, daughter of *W. L. Whitaker; Wilson Edmondson's* wife Maxie; *W. W. Manning; W. M. Corbett* and *Homer Bottoms*. We wish for all of them a quick return to good health. Resident Engineer *E. S. Peabody* recently suffered a heart attack and at this writing is in Johnston Memorial Hospital, Smithfield. Following his hospitalization, he will be recuperating at home for awhile.

CONGRATULATIONS to the following persons who have all received promotions: *Joseph Tedder, Millard Watson, S. P. Joyner, J. L. Womble, H. A. Turner, B. C. Boykin, Archie Murray* and *G. W. DeBerry*.

SYMPATHY goes out to *Kenneth Gay*, whose father died recently, and to the family of *Carl Blackman*. Carl, who worked in Road Oil, died Feb. 10 of a heart attack.

BEST WISHES to Wilson County Machine Operator *E. W. Owens*, who retired on disability after more than 17 years with the Highway Commission.

DIVISION FIVE

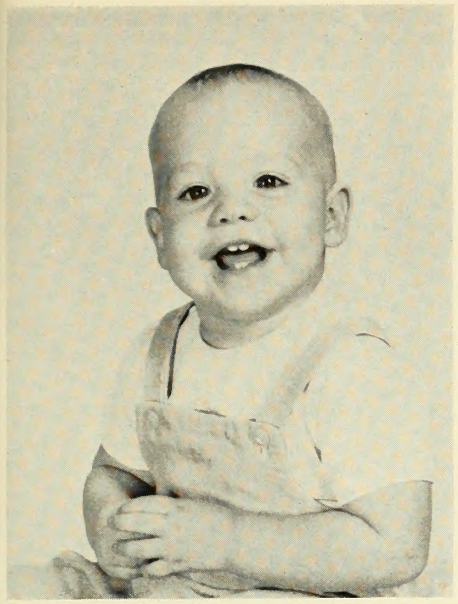
By PEGGY BRIGHT

Division Correspondent

A NEW CONCRETE porch was added recently to the *Bruce Hockaday* home. *G. L. Ellington, W. A. Ellington, H. L. Henley, H. G. Wheeler, C. P. Wilson* and *Sam Grissom* helped with the pouring and were served a brunswick stew dinner upon completing the job.

GRANVILLE COUNTY employees held Ladies Night recently, with *Giles Crutcher* as supervisor of cooking and *Howard Riggan* and *Bruce Hockaday* as chief cooks of the delicious barbecue and brunswick stew.

OUR SPORTSMEN have been having bad luck. *Alvin* and *Frank Laws* had a new companion, *E. B. Critcher*, while deer hunting, but this didn't change their luck. From another report, we have it that Alvin took an early swim while bird hunting recently. How's the water? *H. G. Wheeler* and *H. S. Whitt* are outstanding rabbit hunters in Granville County. Each



Russell Harris flashes a big smile for the photographer and in doing so, displays four new front teeth. He's the son of Mr. and Mrs. L. Y. Harris, and his mother is a steno in the District 2 office of Division 5.

has a pack of beagles and when they are combined, a good chase is sure to follow.

SINCERE SYMPATHY to *P. M. Duke*, *L. L. Pippin*, and *H. L. Alford*, in the death of their fathers.

BEST WISHES to *L. L. Reece* on his new home which he moved into recently.

WELCOME to *Terry Blankenship*, who is working in the Right of Way Department and to *Richard Torbik* and *Neil Harris*, who are working in the District 2 office.

SYMPATHY is extended to the families of two of our retired employees: *Raymond Tippett*, who died Dec. 28 and *A. B. (Fats) Wheeler*, who died Feb. 5. They had been with the Highway Department for more than 30 years. Condolences also to Maintenance Foreman *E. L. Humphries*, in the loss of his wife, and to the family of Mrs. Sybil McBroom, who was the daughter of Machine Operator *T. I. Dean*.

CONGRATULATIONS to Mr. and Mrs. *Braudie B. Sumner* of Durham County, parents of a daughter, Sharon Lynn, born January 21.

THE SICK LIST has included several of our employees, as well as members of employees' families. Lynn Alford, daughter of the *Cloyce Alfords*, was a patient at Rex Hospital, but is home now and reported doing fine. Danny, son of Mrs. *Mattie Hall*, has returned to school after battling a virus. *G. E. Adcock* has been in the hospital, as well as *Giles Crutcher*. We wish a speedy recovery for all of them.

IT'S A BIG HELP to have the assistance of *E. B. Davis* in getting that motor grader started on cold mornings, according to *W. L. Woodlief*.

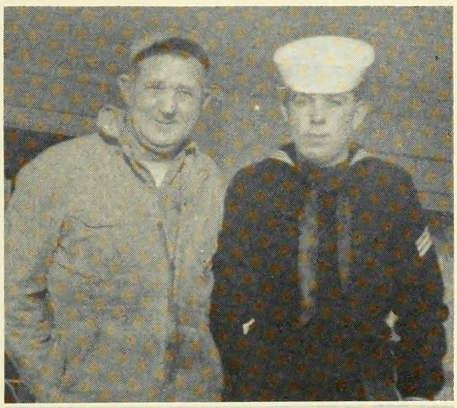
DIVISION SIX

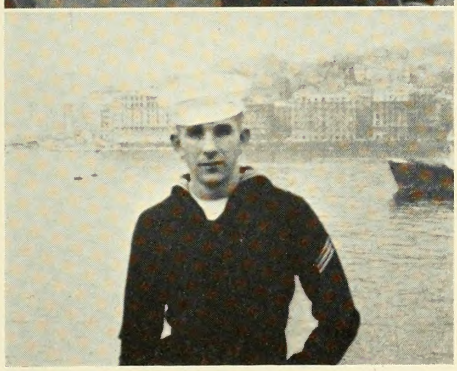
By STEVE AMMONS

Division Correspondent

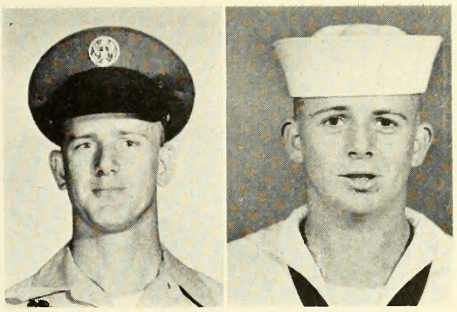
A FAMILY REUNION was held recently when the *W. P. Smiths* paid a visit to their daughter in Winder, Ga. At the same time, another daughter and her family, from Albuquerque, New Mexico, were visiting there, so it was a happy time for all.

IT'S A BOY for the *Richard M. Edmunds* of Columbus County Equipment; for Mr. and Mrs. *Harold Sikes* of Whiteville; the *Thurman Bowens;* the *Gordon Creechs;* and Mr. and Mrs. *Henry Harris*. Bowen, Creech and Harris are all with





District Mechanic and Mrs. Ralph Willis of Weldon are quite proud of their sailor sons. Top photo shows Willis with his son, Seaman George H. Willis, who assigned to the USS Dyess, sailed recently for Cuba. Bottom photo shows Yeoman James H. Willis, aboard the USS Independence on a reeent assignment at Naples, Italy.



These are the sons of Maintenance Foreman and Mrs. T. W. Averitt of Cumberland County. Airman Thomas Averitt, left, is undergoing basic training at Lackland Air Force Base, Texas, while his brother, Seaman Donnie Richard Averitt, is taking basic training at San Diego, California.

construction parties in Lumberton. All of these little boys arrived in January.

A SPEEDY RECOVERY is wished for *Ralph W. Littles*, who has been sick for several months.

CONGRATULATIONS to Machine Operator and Mrs. *W. J. Barker* of Cumberland County, on the birth of a daughter, Deborah Gale.

DIVISION SEVEN

By P. L. WELCH

Division Correspondent

CONGRATULATIONS to our newlyweds, Mr. and Mrs. *Dewey Floyd Graves*, and Mr. and Mrs. *William W. White*. Mrs. Graves, whose husband is a Machine Operator in Alamance County, is the former Faydean Aulbert of Mebane. Our District Engineer's bride is the former Pauline C. Cronin of Rt. 2, Madison.

A SPEEDY RECOVERY is wished for Road Maintenance Supervisor *C. E. McLeod* of Alamance County, who was hospitalized recently, and for *David McPherson*, who has been out sick. Glad to have *Jessie Hall* of the Construction Department back at work after illness.

EVERYONE is wondering about the mysterious potion which *J. W. Hooper*, *M. C. Dailey* and *J. W. Rainey* have been drinking. We understand that it restores youth!

SYMPATHY goes out to Machine Operator and Mrs. *J. E. Hunter* in the loss of their little grandchild, and to *I. O. Cooke* of the Equipment Department, whose brother-in-law died.

BEST WISHES to Machine Operator *Don S. Pettigrew*, who retired the first of the year.

GET WELL QUICK is the wish we extend to *E. R. Tuggle* of Rockingham County, who is hospitalized with a heart attack. *J. M. Carter, W. E. Wilson, I. O. Gammon, L. R. Pegram* and *John Dillon* have been out sick also. Maintenance Yard Assistant *J. I. Parks* injured his left shoulder and arm when he fell on the ice, and *Allen T. Knight* suffered three broken fingers in an on-the-job accident.

A COURSE on driving and maintenance care of equipment was attended recently by *Harold W. Joyce* of Rockingham County, who plans to hold a series of classes in the district to pass on benefits of his training to others.

CONDOLENCES to *Bernard D. Mayhew* of Rockingham County, in the recent death of his brother.

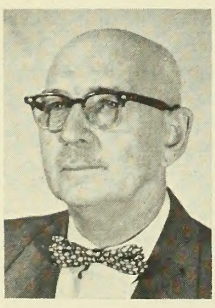
DIVISION EIGHT

By VIRGINIA WILLIAMSON

Division Correspondent

A PLEASANT SURPRISE came in the form of a telephone call to the Division Office from a Pope Air Force Base officer recently, inquiring about the possibility of obtaining some county maps. A short while later, a helicopter appeared and made a beautiful landing on the office grounds under the supervision of our office personnel. This was the first time that we have had visitors from the sky and we found it most exciting.

MORE THAN 30 men attended the Red Cross Refresher Course for Montgomery County employees. The course was conducted by Maintenance Yard Assistant *W. L. Shaw.*



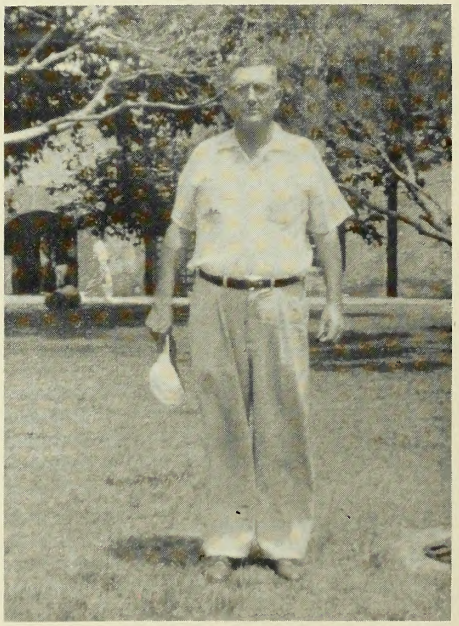
Hough

THE PASSING of *Dexter Hough*, Moore County Maintenance Supervisor, has saddened all of us. He had worked continuously with the Highway Department for about 40 years. We extend to his widow and children, our deepest sympathy. It is with regret that we also report the death of Truck Driver *Wade Coley*, who had been with the department for about 19 years. Our sympathies to his family.



THE WAY IT'S DONE—If some of you hunters have been having difficulty, take a lesson from Maintenance Foreman Roy Jester of Asheboro. His son has been doing a little target shooting with bow and arrow, but always missed the bulls eye, so Dad went on a little hunt to show him how its done, returning a little later with this fine young doe.

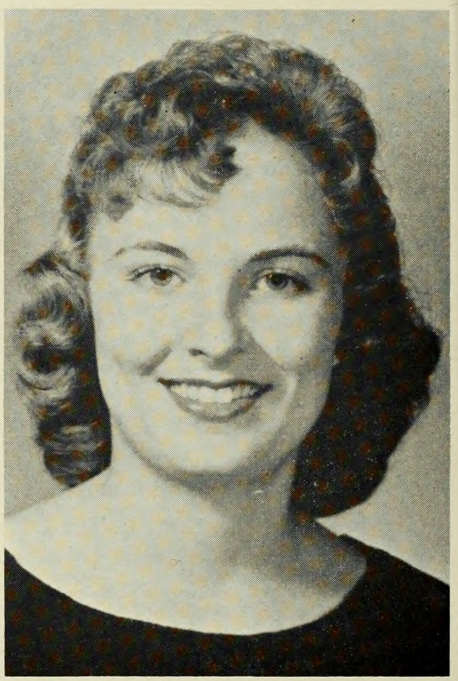
WHEN IT RAINS, it pours, or so *Doug Patrick* might believe. Doug has been hospitalized on two different occasions during the past few weeks, and at the same time, his son and daughter were hospital patients also. All three are fully recovered now, however. Others who have been on the sick list, but fully recovered by this time, we hope, include Truck Driver *C. L. Britt;* Maintenance Foreman *A. S. Tucker; R. G. Shepherd, Danny Hugh Wright,* and *John Wengert.* Also, Betty, wife of *Joe Adams,* has had a real bout with a wisdom tooth. Since she has been using Joe as the nurse, we suggest a change of nurses would bring a speedy recovery.



Maintenance Foreman G. M. Blue, who retired in February after having been with the Highway Department since 1922.

CONGRATULATIONS and best wishes to our new parents, *Mack* and Betty *Dunlap,* whose daughter was born January 12. Mack is a Machine Operator in District 2.

RETIREMENTS in our Division include: *James L. Thomas,* Machine Operator, who had worked in District I since 1934; *C. T. Harrington,* Maintenance Yard Assistant who had been with the Department since 1931; and Maintenance Foreman *G. M. Blue,* a veteran of 39 years service with the Highway Department. We are going to miss these men but wish them an enjoyable retirement.



Linda Carol Staton, daughter of Inspector Mason S. Staton of Asheboro, will graduate this spring from Asheboro High School.

THE CONCRETE SCHOOL in Raleigh was attended by *C. B. Murray, Lee McCaskill, Billy Dunlap* and *Paul Wall,* all of the Construction Department.

SOME OF YOU will be interested to know that Office Engineer *Gentry Morgan* was a recent visitor in Fayetteville. Thurman Russell Craft, Jr., son of Inspector *T. R. Craft* of the Construction Department, has enrolled at Presbyterian Junior College in Maxton. What a nice present it was for Materials Inspector *Douglas Edge,* who moved into his new home in Wagram on December 23rd.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

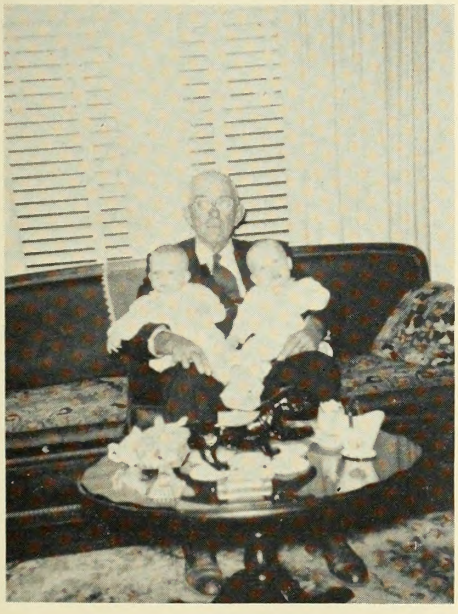
CONGRATULATIONS to Judy Shuping, daughter of *Charlotte Shuping* of the Salisbury District Office, who has completed a cosmetology course at the Plaza School of Beauty Culture in Charlotte.

HE'S DONE IT AGAIN! This time *Fred Everhart* fell and broke his arm. The last time it was his leg. What next Fred, your neck?

BEST WISHES to *C. D. Lookabill*, who retired the first of March. He was a Machine Operator in Davidson County and had over 30 years service with the Highway Commission.

WELCOME BACK, *R. N. Wrenn*, after an extended illness, and *C. E. Everhart*, who underwent an appendectomy. Get well wishes to Truck Driver *J. O. Crotts* of Davidson County, who is still on the sick list.

HEARTFELT SYMPATHY goes to the family of *Horace William Wall*, who died recently, as well to the families of *Harry Lee Smith* and *W. B. Ratledge*. Both men died in mid February.



Edward Liles Winfield holds his year old grandchildren, Bobby Glenn and Roby Linn Winfield. See story on his retirement in Division 10 news.

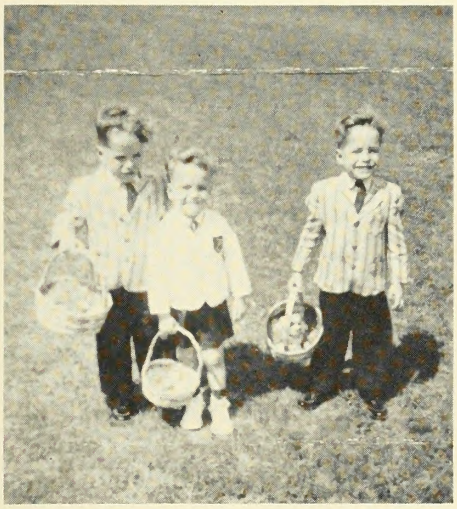
DIVISION TEN

By J. W. JONES

Division Correspondent

A DELAYED steak supper was held by Union County Maintenance Employees. It had been planned earlier, but was postponed because employees were busy clearing ice and snow from the roads.

CONGRATULATIONS to Mr. and Mrs. *Edward Estridge*, who are the proud parents of a son, born Feb. 3rd. Ed is a clerk in the Equipment Office. Best wishes to our new Road Maintenance Supervisor, *Vann P. Eudy*, of Union County, who replaces *John White*, transferred to Anson County. Welcome to *Arthur Taylor*, who



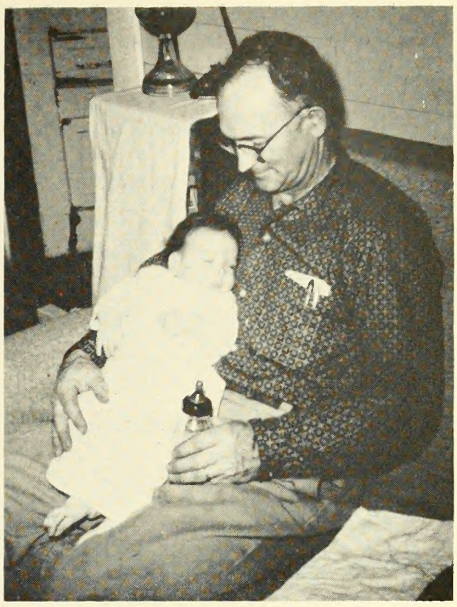
These young men are all dressed up in their Easter finery and ready for the big egg hunt. They are Larry and Jerry, twins, and younger brother Ronald, sons of Marvin L. Kiker, Clerk in the Division 10 Equipment Department.

has replaced *P. F. Hanna*, as a mechanic in the Wadesboro Equipment Shop. Mr. Hanna retired the last of January.

CONCRETE SCHOOL in Raleigh was attended by *B. G. Page*, *T. V. Staton*, *F. A. Tyson, Jr.*, *B. G. Sides*, *J. W. Mitchum*, *W E. Woodruff*, *F. B. Kirk*, *H. L. Bogan* and *D. A. Junghans*.

A NEW SHOP is being built in Cabarrus County for the Equipment Department, replacing the one which burned recently.

FRIENDS of *R. L. "Bob" Brown*, retired, and a former president of the Employees Association, will be glad to learn that he is recuperating satisfactorily from major surgery. Glad to have *D. Henry Hager* back on the job after a recent heart attack, and *William V. Hudson*, *Spencer C. Mauldin* and *Spencer*



One of the proudest grandpas anywhere is A. M. Buchanan, shown here with his pride and joy, Franklin Ray Buchanan.

D. Burris are back at work after long illnesses. The boys are pulling for *J. B. Pridgen*, Anson County Supervisor, who is confined to his home in Salisbury due to illness. He has 35 years of service behind him. Anson County Maintenance Foreman *M. A. Smith* is a patient at North Carolina Sanitorium, McCain, and we hope he has a quick recovery. He has been with the Highway Department for 37 years. Others who have been on the sick list are *George C. Allen*, *P. D. Broek*, *R. F. Brown*, *L. L. Martin* and *R. G. Tiee*.

ONE OF OUR loyal highway workers, *Edward Liles Winfield*, winds up more than 35 years of service when he retires in April. He started building and maintaining roads for Anson County in 1924, and when county roads were taken over by the Highway Commission in 1931, was retained as a section foreman. He pre-



It's easy to see that the three year-old son of Mr. and Mrs. Roy B. Edwards of Division 10 was pulling for the winning team.

sently holds the title of Maintenance Machine Operator I. Mr. Winfield enjoys talking about his past road work, including his "lantern crew," so called because the crew went out to work before light and returned after dark. We wish him much happiness in his retirement.

DIVISION ELEVEN

By CORA LEE GREER

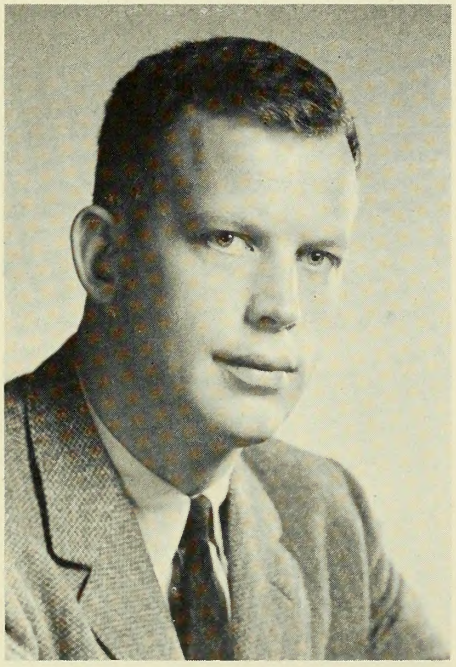
Division Correspondent

THE RECORD has been changed, according to *Ralph Jennings*, who says he killed 2 deer on the last several days of hunting season.

CONGRATULATIONS to our new parents, the *Bill Shepherds* and the *Richard Currents*.

PARKWAY Credit Union held its annual business meeting at the Armory in North Wilkesboro, with *Paul Welch*, Assistant Division Engineer of the Seventh Division, as speaker.

EMPLOYEES were saddened by the death of *A. M. Porter*, Machine Operator, who was killed instantly when his motor grader skidded on ice and snow and overturned. He had been with the Highway Department for almost 20 years. We extend sympathy to his family, as well as to the family of Machine Operator *Marvin Shinault;* and to Truck Driver *B. R. Steelman* in the death of his mother. We extend our condolences also to the families of retired employee *Dewey W. Mitchell*, and *C. J. Farthing*, retired Prison Camp Superintendent.



Fred M. Councill, son of Area Maintenance Engineer J. H. Councill, has been named Director of Sales for Heritage Furniture, Inc. A graduate of the University of North Carolina, he is married to the former Hope Brown of Greensboro and they make their home in High Point.

ATTENDING the Driver Training and Equipment Care School in North Wilkesboro recently were *W. H. Busic, C. T. Edwards, Jr., Alden C. Amburn, H. W. Whitaker, M. A. Beshears, F. L. Tomlinson, W. S. Craft, Jack D. Reavis* and *B. G. Sizemore*.

GET WELL WISHES are extended to *E. C. Greene, D. E. Baldwin, C. R. Key, R. W. Brown, C. S. Ferguson, C. R. Spears* and *C. G. Alexander. C. M. Nixon* is still out due to an extended illness, but we hope he will be well and back at work soon. *Marcus Blackburn, Sim Bullis* and *W. J. Watts* have returned to work after illness. *C. G. Livengood* of Equipment has returned to work following an extended illness. We are happy to have him back, along with *Arnold Bare of* Ashe County and *Clark Ellis* and *C. R. Taylor* of Avery County, who are back after extended illness.

DIVISION TWELVE

By JEAN CLINE

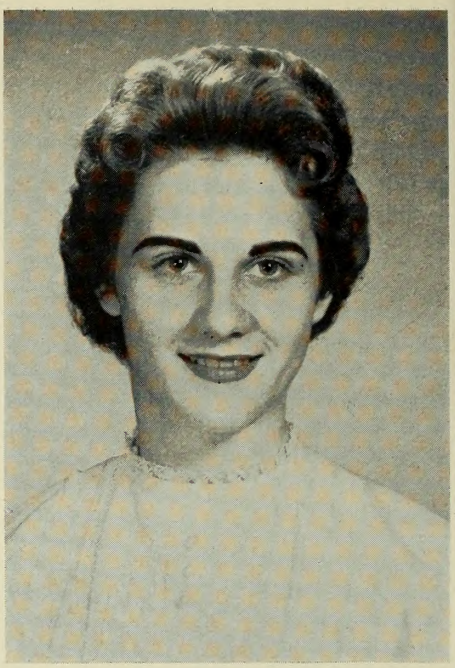
Division Correspondent

FLORIDA VACATIONS have been enjoyed by some of our people while those here at home have been busy battling snow and ice. Foreman and Mrs. *N. W. Feimster* report a delightful time with relatives in the famous racing section, Hialeah, Florida. Retired Office Engineer *E. R. McGimpsey* spent a month in St. Petersburg, Fla.

CONGRATULATIONS to Dean Wright and Peggy Bowman of Shelby, who were married recently. Dean is the son of Traffic Services employee and Mrs. *F. P. Wright*.

SYMPATHY is extended to Maintenance Employee *J. P. Philbeck*, in the death of his mother; to *F. M. Capps* of the Construction Department, whose grandmother died recently; and to Iredell County employee *B. R. Mills*, who lost his father.

IT'S A GIRL for Mr. and Mrs. *B. M. Houser*. Pop works in District I Maintenance. The *Hal Crowders* are proud parents of their first child, a boy, born February 11th.



Brenda Jane Falls, daughter of Mr. and Mrs. Johnnie Falls, is engaged to Norman K. Porter. The wedding is planned for April 16th. Brenda's father is employed in the Construction Department in Division 12.

A WELCOME VISITOR to our office was *Marion Davis*, former stenographer, who now calls Miami, Fla., home. We hear that retired Resident Engineer *P. L. Cantrell*, who is living in Greensboro, is getting along fine.

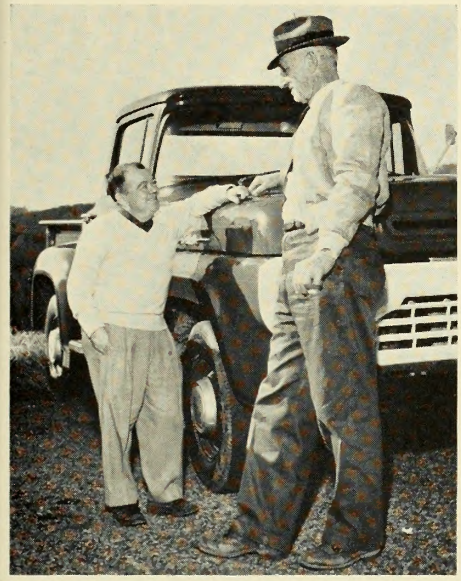
MANY PEOPLE have been on the sick list, but we hope each and every one is fully recovered now. Among those sick include: Mrs. *J. S. Keever; H. B. Robinette's* son; *P. B. Brantley's* daughter; *A. L. Levan, C. A. Matlock, W. H. Chapman, Hal Fox's* son Wayne; Mrs. *I. B. Curlee, T. C. Hurley, W. M. Rudisill, W. P. Lineberger, O. R. Rockett, J. O. Clapp's* son Michael; *Y. T. Martin's* daughter Holly; *J. K. Jarrett, J. H. Poovey's* son Randy; *Pete F. Bray, W. R. Tilley, W. H. Tomlin, R. L. Guy*, Mrs. *C. S. Honeycutt* and *F. H. Flinchum*.

BEST WISHES to Iredell's veteran foreman *J. P. Padgett*, who resigned to go into business for himself. A word of welcome is extended to our new truck driver, *Jasper Rufus Putnam* of District I.

DISTRICT ENGINEER *P. D. Miller*, who has been on leave the past six months due to illness, spent two weeks with his son Dave and family in Newark, N. J. Dave works for Standard Oil Company and left with his wife and small daughter Debbie for a six months special assignment in Holland.

SEEN AND HEARD: Maintenance Supervisor *P. J. Corpening*, after appearing

very sedate as best man at his son's wedding, suppressing a giggle when the ring was dropped. A number of men *(C. C. Campbell, H. I. Tomlin, J. E. Mayberry and R. L. Combs,* to mention a few) taking vacation following the snow and ice rush to get in a little hunting before the season ends. *L. D. Gaither* at home with a cold and sinus infection following emergency work. *Lois B. Knox*, District 2 correspondent, bidding her sister goodbye as she left for Munich, Germany, after eight months in the States because of illness. *N. W. Feimster* passing out oranges straight from the tree in Florida. *H. E. Noell* of Shelby, former Division Engineer at Statesville, visiting briefly with old friends. *J. C. Walker* attending the Equipment Operation and Care School in Raleigh and *Jim Reep* reporting on a pleasant trip to Ohio.



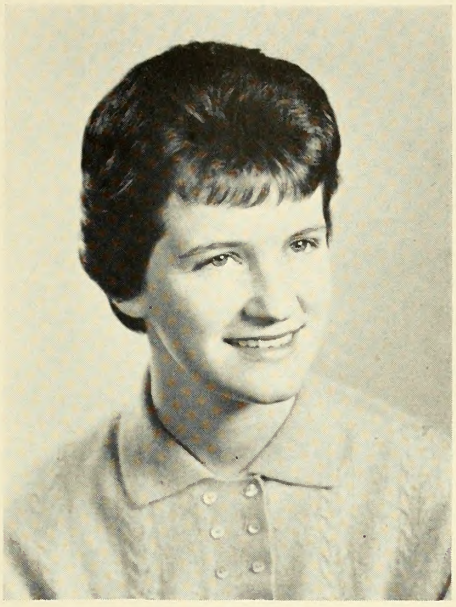
Dan Turner, Engineering Aide in Division 13, receives congratulations from Resident Engineer George R. Prescott, upon being elected to a two-year term as President of the Little People of America. Turner, who has worked for the Highway Department for 12 years, is ROADWAYS correspondent for his Division. Mr. Prescott is a veteran of more than 30 years with the Highway Department.

DIVISION THIRTEEN

By DAN TURNER

Division Correspondent

NEW ARRIVALS include Rebecca Jane, daughter of Area Landscape Engineer and Mrs. *Clyde Orr;* Marsha Reid Owen, granddaughter of Highway Inspector *George Mauney* and Richard Burdette Carroll, son of Motor Grader Operator and Mrs. *Burdette Carroll.*



Mrs. Jack Chandler Buckner, prior to her recent marriage was Verna Dean Clark, daughter of Ernest Clark and the late Mrs. Clark of Marshall. The groom, who is a Highway Inspector with the Construction Department in Asheville, is the son of Mr. and Mrs. Paul Buckner of Marshall.

OUR SYMPATHY goes out to Yancey County Maintenance Supervisor *J. Warren Franklin*, whose brother died recently.

A SPEEDY RECOVERY is wished for Maintenance Foremen *W. C. Hensley, Fleet Reeves, J. G. Snelson, D. C. Boone, Mack Gouge* and *David King.*

WEDDING BELLS rang out recently for Paula Jean French, daughter of Mrs. Myrtle French and the late D. R. French of Montezuma, and *Edward R. Buchanan*, son of Mr. and Mrs. Ben Buchanan of Black Mountain. The groom is an Engineering Aide in Division 13. Congratulations also to Mr. and Mrs. William Ramsey who were married recently and are making their home in California where he is stationed with the Air Force. The bride is the former Brenda Phoenix, daughter of Maintenance Yard Assistant and Mrs. *Fred Phoenix* of Yancey County.

Judge: "Where is Washington?"

Immigrant: "He's dead."

Judge: "I mean the capitol of the United States."

Immigrant: "They loaned it all to Europe."

Judge: "Now, do you promise to support the Constitution?"

Immigrant: "Me? How can I? I've got a wife and six children to support."

DIVISION FOURTEEN

By D. V. RAXTER

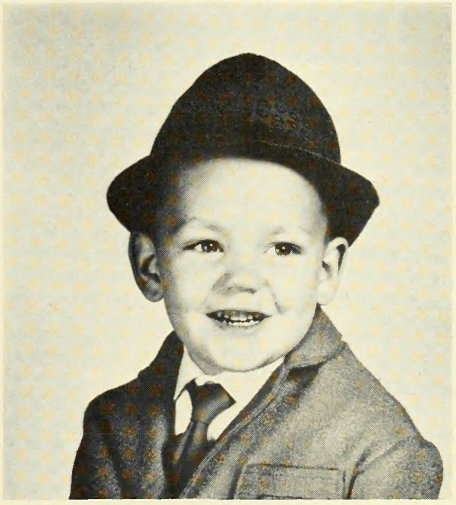
Division Correspondent

SUNNY FLORIDA was the vacation spot for the *W. E. Striders* and daughter Alice. We envy them, what with all the winter weather we've been having here.

A CHRISTENING ceremony was held February 5, at the Brevard Methodist Church for Tommy Galloway, two months old son of Mr. and Mrs. *Tom Galloway.*

WELCOME, *Robert E. Pless*, Highway Engineer from Canton, who has been assigned to the Hendersonville District Office for a training period in maintenance procedures.

MEMBERS of the sick list have included *H. F. Edwards, Ralph T. Snelson* and *Carl O. Ray*, all of whom we hope have recovered now.



This handsome young man is Chuck Brown, four-year-old son of Mr. and Mrs. Charles Brown, and mascot for Sylva-Webster High School. Charles is employed as a parts clerk with the Equipment Department at Sylva.

There's the story of a highway employee who died and journeyed to Heaven. Upon his arrival, he was immediately sent to the other place. Arriving there, he was asked about his previous occupation and after relating this, the man in the red suit immediately wrote out a transfer and sent him back to see St. Peter. Departing, he glanced at the transfer and this is what it said, "Can't use this one because the last highway employees we had here sat around and almost let the fire go out."

Editorials Reprinted

"Highways and the Budget"

The following editorial, "Highways and the Budget," appeared recently in the WINSTON-SALEM JOURNAL:

"North Carolina's highway construction and maintenance program appears to be headed for a slowdown unless some action is taken to shore up its finances.

"Not long ago, the State Highway Commission came up with a 15-year highway construction blueprint designed to keep the state's motor transportation system abreast of population growth and changing economic patterns.

"The commission said at that time the state would have to spend an average of about $33 million more a year on highway construction between 1960 and 1975 if the needs are to be met.

"That program is off to a weak start on the basis of the two-year budget proposals submitted the other day to the 1961 General Assembly. For rather than calling for an increase in highway spending during the coming biennium, the budget recommendations dictate a substantial decrease.

"Specifically, funds available for highway construction and maintenance-estimated at $287 million—are expected to be down by nearly $73 million from the previous two years. This is the only major area of reduction in the entire budget.

"The cause of the major portion of this drop, of course, is beyond the state's control. Because the state passed the peak in Interstate Highway construction about three years ago, federal allocations to the state are dropping off. Some $62 million less in federal money is expected to come to the state in 1961-63 than in the previous biennium. And a drop in federal funds means less money has to be appropriated for matching purposes.

"Nevertheless, no steps are recommended to increase the availability of state funds for highway purposes. Highway Fund collections of state revenue-principally the gasoline tax—are expected to increase at about the same rate as in the past, during the next two years. A gain of about $30 million is expected. This may be an optimistic estimate, considering the uncertain economic outlook and the continuing impact on gasoline consumption of compact and small foreign cars.

"Another factor tending to reduce the amount of funds available for highway construction is the mounting drain on the Highway Fund for purposes not connected with road building.

"A forward step in this connection is the Advisory Budget Commission's recommendation for transferring paroles and probation operations to the General Fund. This would make approximately $1.8 million more available for highway financing. But this saving is more than offset by a $5.5 million increase for prison operations and $1.1 million increase for the Department of Motor Vehicles, also supported by the Highway Fund.

"The Advisory Budget Commission ignored the Highway Commission's requests for a one-quarter-cent increase in the gasoline tax, a graduated increase in auto license fees, a substantial reduction in the annual amount paid for prison labor and a discontinuance of financing prison administration. These requests would have added about $19 million a year for highway work.

"The Budget Commission's failure to recommend any increase in highway revenue besides transfer of paroles and probation contrasts sharply with former Governor Hodges' statement last year that 'if our people get the highways they feel are necessary, somebody has got to find new sources of money.'

"It contrasts, too, with Governor Sanford's campaign assertion in connection with the proposed gasoline tax increase that 'if we want to at least keep up, if not ahead of the game in building highways, then the people who use the highways ought to be willing to pay for them, and a quarter of a cent seems a very small amount in order to do what they proposed to do.' "

"Not Hw'y Business"

We are reprinting the following editorial, "Not Highway Business," which appeared recently in the GREENSBORO DAILY NEWS:

"While the new budget presented to the North Carolina General Assembly last week by Governor Sanford and the Governor's own 'Go Forward' special budget messages are yet to be discussed in detail, as the full picture emerges, one change in administrative policy, entailing a relatively small sum, proposed by the Advisory Budget Commission should meet with no opposition.

"We refer to the transfer of paroles and probation costs from the highway to the general fund.

"When the prisons were a part of the highway system, paroles and probation, a key part of any sound, effective prison department, were logically charged against highway funds. But the prison system is now an independent agency, separated from the highway commission and functioning as an entity under its own commission. The separation, which was entirely too long coming, should be complete. For that matter, as Raleigh Correspondent Lynn Nisbet points out, it could be that the probation should not have been a highway funds obligation even under the old system; its work is essentially a judicial function.

"Now, however, the course is cleared even of semantics. The general fund gets most attention and creates greater problems for the General Assembly which thus is prone to stretch a point here and there to attain balance. But this should not be done in retaining paroles and probation costs as a highway fund obligation. To do so would mean an organic, administrative and fiscal mismatching.

"Separation of the prisons from the highway system has been effected; so now let it be complete save for the supplying, at a fixed charge, of prisoners needed for road work. Actually that need is decreasing sharply, in line with changing highway patterns and practices and an enlightened prisons system which is striving earnestly to make rehabilitation of the men and women entrusted to it more effective."

Funds Approved For Jefferson Park Road

The Highway Commission has approved expenditure of $96,800 for reconstruction work on a secondary road leading to the Mount Jefferson State Park.

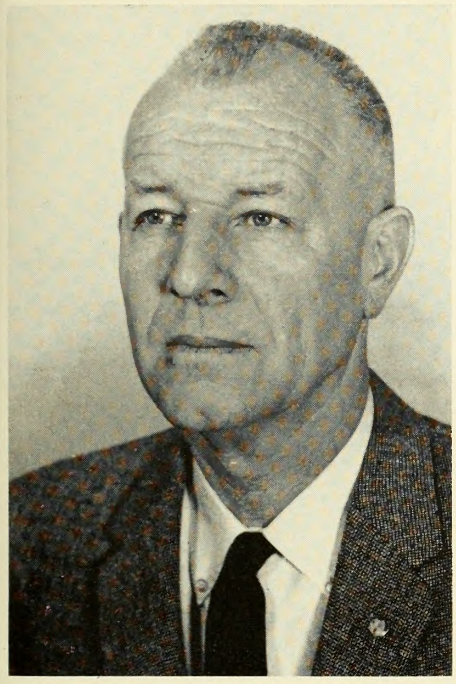
At its late January meeting, the Commission approved the funds for reconstructing secondary road 1152 in Ashe County, for a distance of 2.25 miles in order to provide adequate access to the park. Mount Jefferson State Park is located in a mountainous section and is reached by a narrow road which provides for one-way traffic only.

Assistant Commander

Governor Names Ivan Hardesty To N. C. National Guard Post

Assistant Chief Engineer Ivan (Sig) Hardesty has been named by Governor Terry Sanford to the post of Assistant Commander of 30th Infantry Division in North Carolina.

A career National Guardsman, Hardesty currently holds the rank of Brigadier General and succeeds Brigadier General Maston S. Parham.



Ivan Hardesty

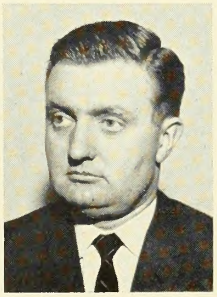
A Raleigh native, Hardesty is a graduate of State College. He enlisted in the National Guard in June 1926, and was commissioned a second lieutenant when he was called to active duty in 1940. He is a veteran of World War II, having served in the European theater. He holds the Silver Star, Bronze Star, Combat Infantry Badge, the American Defense Medal and the Russian Order of Alexander Nevsky. He served as chief of Staff of the 30th Infantry Division from July 1953, until his promotion.

Hardesty joined the Highway Department in 1928 as a rodman. Since that time, he has worked in the Construction and Right-of-Way Departments, being named a District Engineer in 1950, for the counties of Wake, Vance, Warren and Franklin Counties. He became State Equipment Engineer in 1954 and was elevated to the post of Assistant Chief Engineer in 1959.

He is married to the former Jane Chamblee of Spring Hope and they have two sons.

Millard R. Rich Joins Highway Legal Staff

A new trial attorney, Millard Roland Rich, Jr., has joined the Highway Department's legal staff.



Rich

A native of Lumberton, he received his education at the University of North Carolina, where he was awarded the LLB degree in 1956, and was admitted to the bar the same year. Prior to entering law school at the University, he taught school in Madison County.

Rich worked in the office of the Clerk of Superior Court in Robeson County from September 1956, until February 1st of this year when he joined the Highway legal staff.

Married to the former Nancy Bailey of Chapel Hill, he is the father of James, nine, and seven-year-old Catherine Rich.

SNOGO'S

(Continued from page 8)

The two SNOGOS were purchased on contract from A. E. Finley & Associates, Inc., of Raleigh, at a cost of $22,376 each.

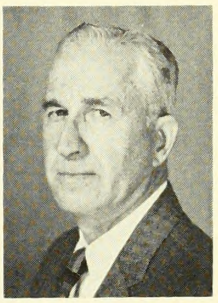
Although the new pieces of snow removal equipment have have yet to see action on North Carolina's highways, it is expected that they will be of great help to maintenance forces whenever the next big snowfall occurs.

In 12th Division

P. D. Miller Retires; Corpening Named District Engineer

Paul Judson Corpening of Statesville is the new District Engineer in Division Twelve, with headquarters in Statesville. He succeeds P. D. Miller who retired recently.

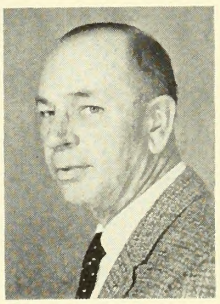
A native of Caldwell County, Corpening has been with the Highway Department for 36 years. At the time of his promotion, he was Road Maintenance Supervisor in District II, which comprises Alexander, Catawba and Iredell Counties. In his new job, Corpening will be in charge of construction and maintenance work in these counties.



Corpening

The new District Engineer is a graduate of Lenoir High School and attended Rutherford College. He is married to the former Winnifred Hoyle and they make their home at 721 Stockton Street, Statesville. They have one son, Alexander Newton Corpening.

Miller is a veteran of 38 years with the Highway Department. A native of Stanly County, he had served as District Engineer since 1941. Prior to that time, he served as Maintenance Supervisor and as a Resident Engineer. He is married to the former Nellie Moore and they have two sons, Paul Jr., and John. The Millers make their home at 634 Holland Drive, Statesville.



Miller

Two fishermen siting on a bridge, their lines in the water below, made a bet as to who would catch the first fish. One got a bite and got so excited that he fell off the bridge.

"Oh, well," said the other, "if you're going to dive for them, the bet's off."



This unusual photograph by Tom Walters of the CHARLOTTE OBSERVER shows the tremendous advantage of adequate thoroughfare lighting on Charlotte's Independence Boulevard. The streaks of light are formed by approaching headlights and the effect is achieved by time exposure.

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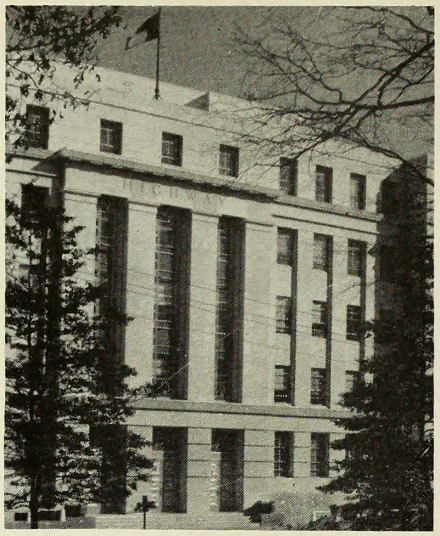
MAY-JUNE, 1961

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May-June
SAM BEARD.....Editor
JEANNE HAWTHORNE.....Assoc. Editor

The Cover

The cover gives a bird's eye view of the path the Raleigh Beltline is cutting through the city. The photo, taken from the Photogrammetry Department's plane, shows the work underway in the vicinity of Meredith College. The first grading and structure contract was let on a 4-mile section of the Beltline last year and the paving contract on this section is expected to be let this fall. Contractors on the grading and structure work of this section are Ray D. Lowder and James T. Triplett and this contract alone is in excess of 1½ million dollars. Another project, for grading, base work, paving and structures on a 4-mile section between US 70 and US 1, was let in April. Successful bidders were: roadway-Nello L. Teer Co., $1,641,372.30; and structures - Wanamaker and Wells, Inc., $743,848.52.

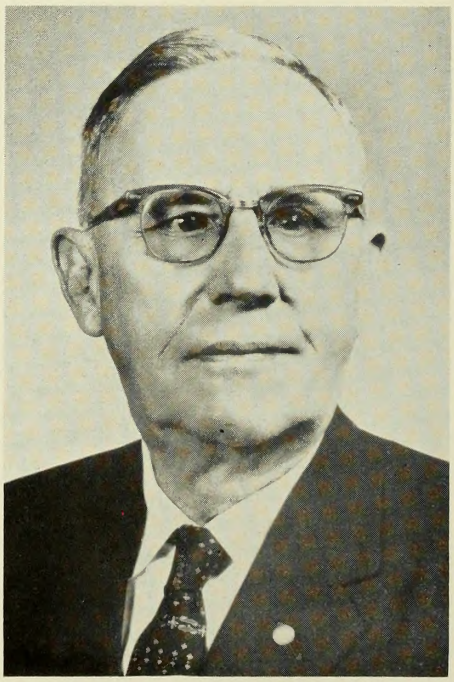
Moving??

If you are planning to move soon, please let the staff of ROADWAYS know so that your address can be changed.

Send your present address, along with your new address, on a post card to the Public Relations Department, State Highway Commission, Raleigh, N. C.

Commissioner J. Lee White Resigns To Join State Agriculture Stabilization Committee

J. Lee White of Concord, a member of the State Highway Commission since 1957, has resigned from the Commission to become a member of the State Agriculture Stabilization Committee.



J. Lee White of Concord

A native of Cabarrus County, Mr. White received his education at Rocky River High School and at State College. He served as farm superintendent at the Jackson Training School for 31 years, and was a member of the Cabarrus County Board of Commissioners from 1930 until he was appointed a member of the Highway Commission by former Governor Luther Hodges.

Active in civic affairs, he has served as president of the Concord Rotary Club, the Concord Community Chest, the Concord Chamber of Commerce and the Concord Boys Club.

A Presbyterian, he is married to the former Mary Bernice Pharr. They have no children.

There has been no indication that Governor Sanford will appoint a successor to Mr. White before the Highway Commission Reorganization Bill goes into effect on July 1st.

Planning Board Irons Out Difficulties On Many Projects

The old adage, "two heads are better than one" has been proven ten times over with the Planning Board of the Highway Department. Little has been said about the existence of this 20-member group of top engineers and administrators in the Raleigh office but its work has been outstanding in ironing out minor difficulties on the many highway projects which are planned and bulit.

The Planning Board is a relatively new function in North Carolina road-building, but the idea is not entirely new. It's somewhat similar to a board of directors which guides the administrative practices of many large organizations. The Planning Board was officially incorporated into the state's highway business in August of 1959, and since then, has become a regular Monday morning routine for department heads and top engineering personnel.

The work of the Planning Board includes reviewing every major highway project, as well as many small ones. Discussions on a given Monday may range all the way from the location of a large Interstate job down to street width on a minor curb and gutter project inside a small town. The Board reviews all preliminary plans before they are taken to public hearings. It may order preliminary engineering, planning studies, aerial and ground surveys, and special problems such as crossovers, traffic control features, design, location and contract specifications may also be brought before the Planning Board.

Should the Planning Board wish, it may make changes in Advance Planning recommendations or reject the report and send it back to the department for major revisions or study. The Board also has authority to order new surveys, origin-destination studies, photogrammetry projects and can program work with the U. S. Bureau of Public Roads.

Not only does the Planning Board review projects which have already been approved for construction by the Highway Commission, it also takes under consideration many needed jobs which may later be presented to the full Commission. Generally the Highway Commission approves projects twice each year and, in practically all cases, asks for a recommendation from the Highway Director and his staff. In many instances, the Planning Board examines the list of more than 1,000 needed highway projects which have been listed in the 15-year highway needs study and comes up with what it considers to be the most vital projects.

The Planning Board also determines when a project proposal is ready for a public hearing and hears reports on the results of public hearings. Should citizens at a hearing register extreme opposition to any project, the Planning Board can order a complete re-analysis of the entire project.

Principal work of the Planning Board lies in the review of scheduling, design, location and even paving specifications for projects already approved by the Highway Commission and in projects which have been requested by Division Engineers.

Prior to each meeting, the Advance Planning Department, headed by R. J. Kimley, prepares an agenda for the meeting and distributes planning studies, reports and recommendations of the department. These reports are forwarded to members of the Board several days in advance of the meeting, enabling them to familiarize themselves with the project and with the preliminary recommendations.

In the case of a new project, the report shows present traffic on existing facilities along with anticipated 1980 traffic. The report also lists the number of lanes recommended, the corridor location, possible staging of various sections of the project and many other details. Members of the Advance Planning Department who have worked on the project analysis sit in on the meeting and may be called upon to discuss their work or explain the problems encountered. Board members are urged to speak their mind on the Advance Planning recommendations with regard to traffic service to be provided, right of way difficulties, construction problems, etc.

The idea back of the Planning Board is quite simple. Granted that there will always be some areas of disagreement over where and how a highway project should be planned and built, the Board



Members of the Planning Board, from left, aronnd the table: W. H. Webb, Right of Way Engineer; C. R. Green, U. S. Bureau of Public Roads; J. S. Burch, Planning Engineer; Fred Jerome, Henry Bremmer and L. S. Coy of the Bureau of Public Roads; Advance Planning Engineer R. J. Kimley; Director W. F. Babcock; Chief Engineer C. W. Lee; Asst. Chief Engineer Ivan Hardesty; Hunter Irving, Construction Engineer; W. A. Wilson, Jr., Design Engineer; W. S. Winslow, Bridge Engineer and Lloyd Cook, Locating Engineer. Beside the window are Jim Prince and Bill Caddell of Advance Planning and Traffic Engineer R. A. Burch. Carolyn Beck, Planning Board Secretary, is also pictured.

feels that many differences of opinion can be ironed out in the early stages of project development if the various engineers and department heads have an opportunity to speak their peace in open forum. Once all the different ideas are placed on the table and fully discussed, there's a much better chance of coming up with a logical answer that may avoid big trouble later on.

One of the chief advantages of Planning Board deliberation is in the speeding up of pre-construction work. If there is reason to rush a project through the location, design or right of way stages, this can be determined at a Planning Board meeting and a time schedule can be prepared to guide the various departments through their work.

Another advantage is in the coordination of the work of the U. S. Bureau of Public Roads with that of the Highway Department. Four Division staff members from the Bureau, including its Division Engineer for the State, attend the Planning Board sessions regularly and can often indicate whether the Federal agency can go along with a project and participate in its costs. Bureau officials often contribute to the discussion by suggesting project revisions and giving counsel to the State. The fact that the Bureau participates in the very earliest part of project planning in itself tends to create understanding on knotty problems which might cause serious delays after a project is in the design stage or has been let to contract.

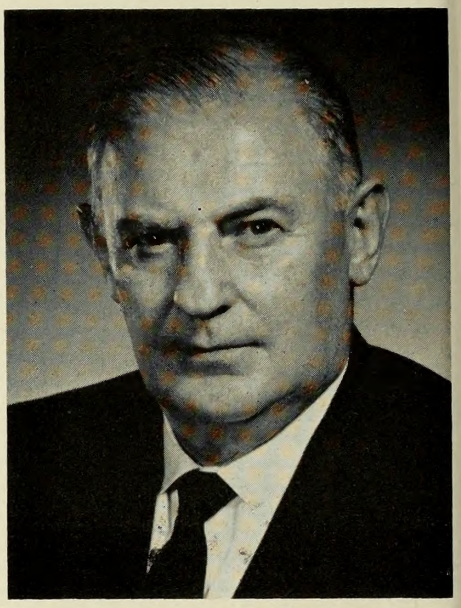
Membership on the Planning Board can hardly be said to be limited. It includes the Planning and Advance Planning Departments, Traffic Engineering, Finance, Location, Right of Way, Design, Public Relations and the U. S. Bureau of Public Roads Division Office. In addition, there is the Director of Highways, who serves as Chairman of the Board, the Chief Engineer and the four Assistant Chief Engineers. Often when the agenda calls for consideration of a special problem the Board calls in an authority from the field for consultation.

Many people have been so scared by reading about the harmful effects of smoking that they have decided to give up reading.

Lowell Coy Transferred:

Bureau Of Public Roads Engineer Returns To Texas

Lowell S. Coy, who has been serving as Division Engineer for the U. S. Bureau of Public Roads in North Carolina since 1959, has been transferred to Texas, where he will hold a similar position with the Bureau.



A native of Anderson, Indiana, he is a graduate of Purdue University, with a degree in civil engineering. Following graduation, he worked for five years in the general contracting business in Indiana, later joining the Bureau of Public Roads as a junior engineer in Austin, Texas, where he worked until 1959, except for several years. During World War II, he served as a colonel with the Corps of Engineers, Department of the Army, in Virginia, on the location, design, and construction of complete military installations. In addition to his construction responsibility, he was also in direct charge of the Overseas Lumber Depot, and was awarded the Legion of Merit for development of new methods of processing and handling of lumber for overseas shipment.

He returned to Texas after his military service, but in 1951, was borrowed by the Corps of Engineers for a two-year assignment in French Morocco. He was a civilian assistant to the District Engineer on construction of air bases there. Returning to the Austin, Texas office of the Bureau, he served as Area Engineer, District Engineer and held the dual responsibility of Program and Planning Engineer and Assistant Division Engineer prior to his assignment as Division Engineer for North Carolina with headquarters in the Highway Building in Raleigh.

Coy is a registered professional engineer in Texas. His hobbies include hunting, fishing, boating and building and he has built his own boat, a lake cabin as well as most of his Texas home.

The Coy's have one daughter, Karen Louise, who is a high school student.

National Highway Week Observed With Interstate 40 Dedication

In observance of National Highway Week, a dedication ceremony and opening of Interstate Route 40 between Hildebran and a point near Marion was scheduled for Friday May 26.

A number of dignitaries, including Secretary of Commerce Luther H. Hodges, Federal Highway Administrator Rex M. Whitton; U. S. Bureau of Public Roads Regional Engineer Rex Anderson, U. S. Senator Sam Ervin and Lt. Gov. Cloyd Philpott were scheduled to attend the opening and take part in the ceremonies.

Others who were invited to the dedication include officials of all counties through which Interstate 40 will eventually pass, along with many city officials, congressional representatives and members of the State Legislature.

The site chosen for the dedication is at the intersection of I-40 and US 64, just south of Morganton.

Following the dedication and opening, the City of Morganton invited dignitaries and special guests to a luncheon in the Community Building.

The Highway Commission's regular meeting was held in Morganton in conjunction with the dedication.

Preparation Of County Maps Near Half-Way Mark

The king-size job of preparing new county maps for each of North Carolina's 100 counties is approaching the mid point, according to Planning Engineer James S. Bruch.

At the present time, about 45 per cent of the work has been done on the new map series and about 40 basic maintenance maps have been turned over to the Location Department for reproduction and distribution.

The placing of numbers on each of the State's secondary roads was one of the reasons which brought about the need for a new series of county maps to replace the basic maps which have been in use since 1939. The original maps were prepared by the Planning Department and each year, have been corrected and revised, but the wear and tear of 20 years use has caused them to become dim, fuzzy and unclear in many details. The old process involving wash water had caused gradual warping and shrinkage, and the old maps were not always exactly true. In many cases, the county lines did not exactly fit.

In making plans for producing the new maps, a space problem was presented when it was realized that the four-digit numbers used for designating secondary roads would require about half an inch of space, while in many cases, the numbers would take up more map space than the roads themselves. In many areas, especially suburban sections, there are entire networks of short secondary roads.

It was necessary to design a completely new format, with narrower and sharper edged road bands, smaller culture symbols, and other changes, in order to show the numbers, along with all houses, churches, schools, mileages, road types and systems.

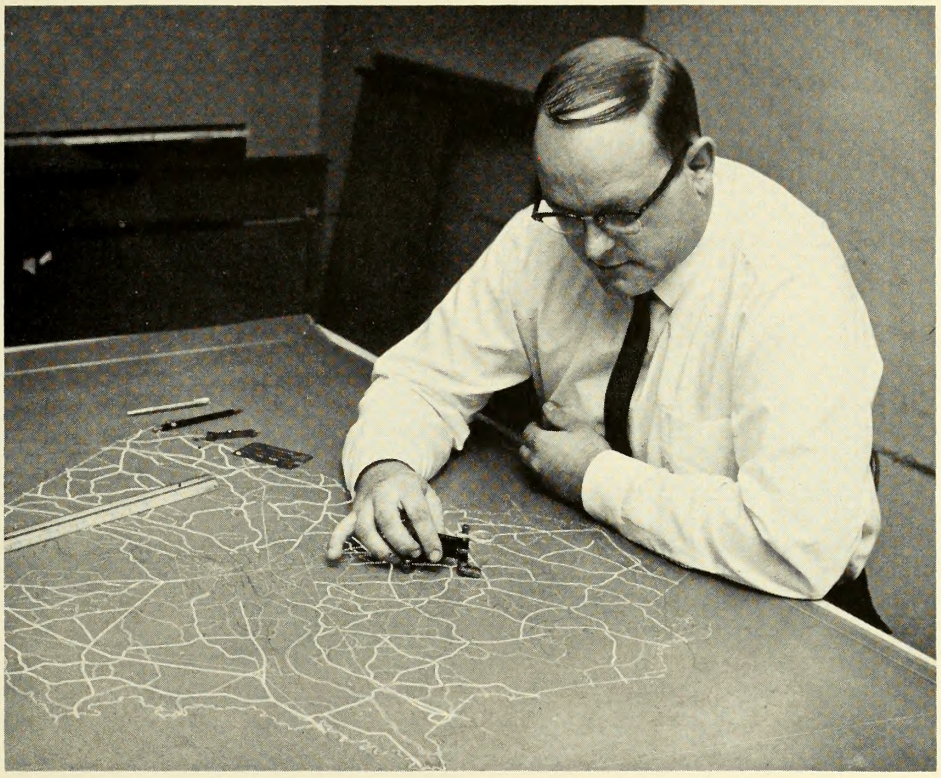
At the same time, it was decided to take advantage of the very latest techniques in map making, eliminating the use of tracing linen and wash-water processes, as well as the use of ink. The new technique involves the use of plastics, a direct reducing mirror projector, scribing and preprinted stick-on adhesive material for all symbols, numbers and letters.

Few people realize the amount of intricate work which must go into a single county map — and over 165 of them are required in each of two series to cover the 100 counties and the municipal enlargements. For example, each section of each map must be geodetically accurate, being based on geodetic monuments, first and second order triangulation stations, with grid patterns designed to care for the spherical curvature of the Earth's surface. Each road section must be exactly positioned and correctly connected. Every county line must be fitted to its neighbor, together with all crossing streams, railroads, highways, roads, airports and other such major items of geographical and topographical importance. It has been estimated that if one man did nothing else, it would take him five months to complete one map through all the stages. Nineteen persons are currently engaged in the work on the maps, along with four field men who handle map checking in the various counties.

The road length on all the maps would extend almost three times around the world, with each road segment being accurately drafted and detailed according to length, type, system and road number. In addition, there are over a million small items such as houses, stores, schools, churches, camps, cotton gins and the like—each one must be positioned by hand and fitted to other items, usually in a crowded situation.

Two series of maps are being made: one for maintenance purposes without the houses, and the other for planning purposes with the houses. Each map is being designed so that it can be reduced to half scale and still be legible, with uniform page dimensions to fit counties as different in size as Lee with 255 square miles and Robeson County with 944 square miles. Dare County covers as much space as 10 Camdens or Polks.

Financial assistance is being obtained from the U. S. Bureau of Public Roads, using Highway Planning Survey funds, and the maps are being made of the highest quality and to rigid national standards to conform to the require-



This picture shows cartographer Don Corwin "scribing" the roads in Pitt County, using a tool which removes the opaque covering on the plastic to create sharp, precise transparent road lines. This is the final drafting step before the letters, figures and symbols are stuck on by adhesive.

ments of the Bureau. Each map is checked several times before it is completed and released for publication.

Maps have been or will be completed soon on the following counties: Cherokee, Clay, Graham, Swain, Macon, Jackson, Haywood, Henderson, Polk, Transylvania, Davidson, Richmond, Scotland, Bladen, Columbus, Brunswick, New Hanover, Pender, Duplin, Onslow, Jones, Carteret, Lenoir, Greene, Craven. Pamlico, Beaufort, Martin, Washington, Hyde, Tyrrell, Dare, Bertie, Hertford, Gates, Chowan, Pasquotank, Camden, Currituck and Perquimans Counties.

The work was started simultaneously at the Atlantic Ocean and the Tennessee State line. The basic reason for doing this was that the geodetic data was most complete in these areas, being based on U. S. Coast and Geodetic monuments in the East, and on Tennessee Valley Authority monuments in the far West. Cartographer Don Corwin said that although the job is difficult and enormous, all the folks in the map drafting room are giving it the big "push."

A small town is a place where everybody knows what everybody else is doing, but they still read the local paper to see if anybody's been caught at it.



This picture shows the members of the County Map Section of the Planning Department, who are engaged in preparing the new county maps with secondary road numbers. Left to right: James S. Burch, Planning Engineer; Guy C. Farmer, Donald E. Corwin, cartographer; Rachel Gregory, Larry Wallace, Mary Nancy Meek, Allen Long, Ben Johnson, Barbara Thore, W. H. Taylor, Eleonore Buchmann, Connie Mack Wester, Rowena Keith, Allan McDuffie, David Young, Shelby Womble, Vester Blanton, Nellie Tutor, John Wellman, Frank Davis and Vilis Keglers.

News Releases Explain Work Of Ground Survey Parties

Special news releases are now being prepared regarding the work of aerial and ground survey parties. The releases, which explain the work of a survey, and the fact that ground control stakes do not necessarily indicate the location of a highway through the area, are sent out several days in advance of the expected beginning date of a survey.

This was begun recently after some confusion arose from the work of crews involved in surveys for US 74 in the Rutherfordton - Spindale - Forest City area.

Instructions have also gone out to survey parties regarding the type of information which is to be given to property owners and the general public by the survey crews. Personnel involved in surveys have been reminded to give the public the information that surveys are only preliminary investigations and that staking operations do not necessarily indicate that a highway is going through the area.

In the case of ground control stakes, the concrete markers can be several thousand feet away from the actual corridor being surveyed as a possible route location. These ground control stakes are generally placed in open areas where they may be easily identified on aerial photographs.

Precise elevations above sea level are computed at the site of the stakes and used as reference points in determining contour lines and elevations throughout the entire area under study. With these known elevations at the reference points, all other elevations can be determined with the use of the Photogrammetry Department.

When a property owner finds one of these stakes in his front yard, he naturally becomes alarmed about the eminence of a project through his property, when in reality, the actual line may be several thousand feet away.

For some time now, survey parties have been instructed to contact property owners before entering the property for any type of survey. This generally eliminates complaints from individual property owners. However, misunderstandings over the work of ground control teams have arisen with the city councils and other official bodies who have no property directly involved but who are interested in the eventual location of the route. Efforts are being made to inform the newspapers, radio and television stations, when a survey is to be started, so that people have the facts of the study available to them.

In the case of the US 74 project, ground control stakes were placed several thousand feet south of the proposed highway location. Town officials of Spindale, feeling that the stakes marked the center line of the highway, issued vehement protests about the apparent movement of the location far south of their town. After the protest was issued, contact was made with local officials in the area and the misunderstanding was cleared up.

Contractors, Engineers Discuss Construction Procedures

At Third Annual Highway Conference

"Highway Construction Procedure" was the theme of the third annual State Highway Conference held recently at State College with more than 300 contractors, equipment and materials suppliers and highway personnel in attendance.

Although a large portion of the conference was devoted to workshop sessions on contract specifications and construction procedures, there were talks by Lt. Governor H. Cloyd Philpott, Rex Anderson, Regional Engineer for the U. S. Bureau of Public Roads; Highway Chairman Merrill Evans, Highway Director W. F. Babcock, N. K. Dickerson of Monroe and Chief Engineer C. W. Lee.

Following greetings by Dr. John T. Caldwell, State College chancellor, the meeting got underway with a talk by Lt. Governor H. Cloyd Philpott.



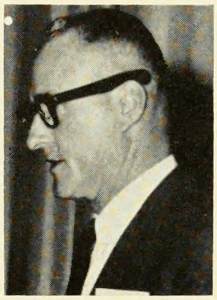
Philpott

Lt. Gov. Philpott told the delegates they "are part and parcel of our drive for better education, improved agricultural economy, greater industrial output and a higher standard of living for our people." He said development of the State's highway system requires the teamwork of many groups, including contractors, suppliers, engineers and others.

In closing, the Lieutenant Governor assured the conferees of Governor Sanford's interest in their work and said Sanford "will lend the services of the Governor's office to all efforts to increase the effectiveness of your work".

Rex Anderson, Regional Engineer for the Bureau of Public Roads in Atlanta, emphasized in his opening day speech that "it takes a lot of imagination, planning, money and plenty of good hard, honest work by a multitude of people, including you and me, to develop and build a great highway transportation system."

Anderson reminded the delegates that a service to the people is being provided through the highway program. He told them "We must be sure our patrons—all the taxpayers—know it too. Let's put our few scandals and failures in their proper perspective by showing the real progress that is being made—the tremendous return that our patrons are getting for their tax dollars."



Anderson

He pointed out that the Nation now has over one-fourth of its Interstate mileage open to traffic. North Carolina, he said, has been one of the leaders, and is certainly the leader in this part of the country in mileage open to traffic.

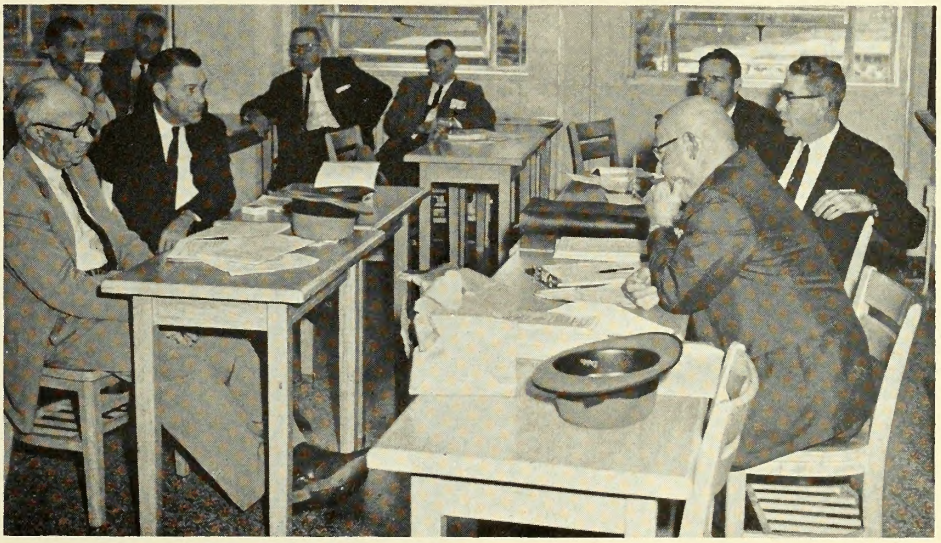
Anderson emphasized the urgent need for completion of the job on time, stressing the need for additional funds with which to do the job.

In his talk before the three-day conference, contractor N. K. Dickerson of Monroe took a healthy poke at opponents of Federal highway financing. The benefits of the Interstate program, he said, far outweigh the cost.

Dickerson told of reports that the two largest insurance companies in America could finance the whole program out of current assets; that the five largest banking firms could write a check for the whole 17-year program tomorrow.

"Of even greater significance," he said," is the report that the eight largest industrial firms in America could undertake the whole program." With obvious reference to the petroleum industry's campaign on gasoline taxes, he added, "Four of the eight corporations are producers of petroleum products." Noting that such products are used mainly on the public highway system, Dickerson posed the question, "I wonder how they got so big."

In outlining suggested improvements in construction procedures Dickerson said it might be well to divide larger contracts between grading and paving, with separate contracts for each. This, he said, would eliminate extended tying up of available State funds, which could be used for other and more current work. Dickerson said contracting for paving along with grading means an immediate obligation and set aside of funds wherein the work might not be accomplished until some eighteen



This scene was re-lived many times during the workshop sessions of the Third Annual Highway Conference at State College, when engineers, contractors and materials suppliers gathered to discuss various phases of contract specifications and construction procedures.

months later, while dividing the contracts gives a wider spread of money on a current operating basis.



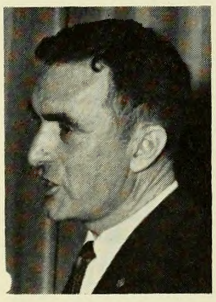
Dickerson

The Monroe contractor also called for more authority to be given the field engineers in making decisions on the job.

In closing, he said, "You are to be congratulated on the progress and accomplishment made in the last few years toward modernization of the Department and upgrading of its personnel."

Chief Engineer C. W. Lee told the delegates how the IBM computer is being used in bid tabulations in an effort to improve operational procedures. Formerly, he said, almost two dozen design engineers with desk calculators were employed for several hours in manual computation work. He said now the job has been simplified, expedited and streamlined through semi-automation, and the design engineers are left at their drawing boards to work on projects for subsequent lettings.

Lee also traced the duties of the bid review board, comprised of the Chief Engineer, four Assistant Chief Engineers and representatives of the U. S. Bureau of Public Roads, in reviewing the low bids and making recommendations to the Highway Commission. He also outlined the responsibilities of the engineer and the contractor as well, in seeing that specifications are followed to prevent inferior work.



Lee

In closing, Lee expressed the hope that discussions during the conference would bring about agreement on interpretations of specifications between the engineer and the contractor and generally provide a better working relationship between the contractor and the engineer on highway construction projects in North Carolina.

"If this can be done," he concluded, "we will be able to provide a finer quality highway job at a reduced cost, perhaps place it in service earlier, and eliminate many of the problems which arise to plague both the contractor and engineer."

Speaking before the luncheon on the second day of the conference, Highway Chairman Merrill Evans of Ahoskie said research into new and better methods of road building may very well be the best answer to North Carolina's billion dollar road need. He said the work now being done in highway research is one of the most important elements of highway work.

Chairman Evans cited three alternatives which could be followed: first, to get a greatly increased amount of money to spend on Primary and Secondary roads; second, to build better and better highways at less cost; and third, admit the job is hopeless.

"There is not one among you here," he said, "who would say that you cannot do the job better and no one here who would ever admit that the problem is hopeless."

He said we must find new and better methods of building roads with less money and termed research such as that now being conducted by the Highway Department, the U. S. Bureau of Public Roads and State College as a beginning point. Evans expressed the hope that a foundation for such research might be established at State College, or in the Research Triangle.

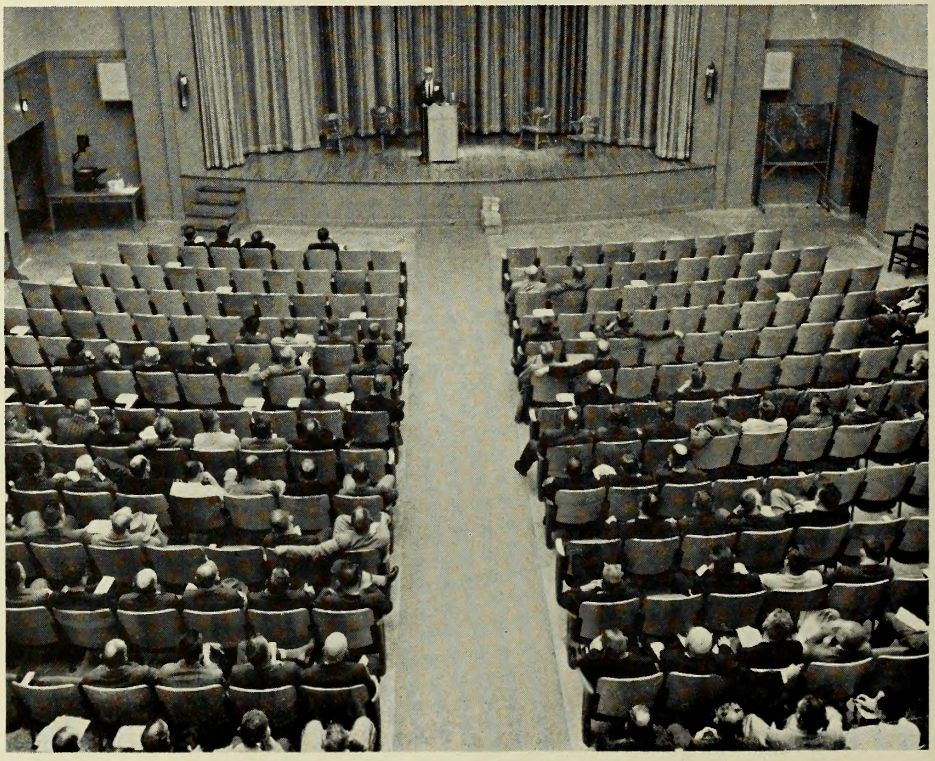
In closing, Evans emphasized that most important of the three alternatives is to seek self improvement in the highway construction field and added that it would be impossible to find a finer group of public servants than the highway people who are endeavoring to do the job.

The future of the highway program in North Carolina was discussed by Highway Director W. F. Babcock at the closing session. He told the conferees that highway personnel and contractors want a 10-year plan or something of that type to raise taxes for highway construction. He said this plan is needed in order to plan highway construction ahead of time.

Babcock cited an increase of 155 per cent in overhead and maintenance costs since 1949 as the reason North Carolina's road-building fund situation is critical, adding that a 25 per cent increase in the budget would be needed.

In wrapping up the conference, he pointed out that an efficient construction program in North Carolina calls for the most efficient techniques and for the closest kind of professional cooperation among the various elements, including

(Continued on page 8)



Conferees are assembled in one of the general sessions of the three-day event.

Two New Research Projects Approved; Five Others Will Be Continued

The Steering Committee of the Highway Research Program at North Carolina State College at its meeting on April 13, approved the initiation of two new research projects, as well as the continuation of five research projects which have been under study for the past two years. Two additional two-year projects are under study, having been approved last year.

One of the new projects will be concerned with bridges made up of steel stringer beams with a concrete floor. The objective of the investigation will be to determine the interaction between the floor slab and the steel stringers. The second new proposal will investigate the effect of the viscosity of asphalt on the mixing, laying and compaction of bituminous mixtures and will seek to establish the range of fiscosities necessary for optimum results.

The projects currently under way, and those approved for continuation, deal with a variety of problems in planning, design, construction, and maintenance. Such problems as soil stabilization, control of vegetation through the use of herbicides, the lateral distribution of load across a precast, prestressed concrete bridge, the effectiveness of steel diaphragms in steel stringer bridges, the establishment of guidelines for the structural design of rigid and flexible pavements and the economic impact of controlled-access highways are being investigated by the State College group.

The over-all objective of the Highway Research Program at State College was stated clearly and succinctly by Highway Commission Chairman Merrill Evans, speaking at the Third Annual Highway Conference in Raleigh when he declared, "We must find new and better methods of building roads in North Carolina with less money."

The recent action of the Steering Committee signaled a flurry of activity at the College. Graduating seniors with high scholastic averages are being interviewed to determine their interest in participating as graduate students in the research studies. About fifteen graduate students are required to staff the various projects. Technical direction for each study is provided by regular members of the College engineering staff. A number of undergraduates will also be used during the summer months.



McCullough

The Steering Committee consists of five representatives from the State Highway Commission, five representatives from the College, and two representatives from the U. S. Bureau of Public Roads. Representing the Highway Commission are W. F. Babcock, Director of Highways; C. W. Lee, Chief Engineer; Ervin Dixon, Comptroller; James S. Burch, Planning Engineer; and J. E. Thompson, Materials Engineer. Serving on the Committee from the College are J. H. Lampe, Dean of the School of Engineering; R. E. Fadum, Head of the Civil Engineering Department; N. W. Conner, Director of the Engineering Research Department; C. R. McCullough, Coordinator of the Highway Research Program; and J. W. Horn, Professor, Civil Engineering Department. Babcock and McCullough serve as Chairman and Vice Chairman, respectively, of the Steering Committee.

Impact Of New H'wys To Be Subject Of Research Project

At its April meeting, the Highway Commission approved $22,547 for the initiation of research study on the impact of new highways on the immediate surrounding areas.

In recommending the project, Director W. F. Babcock said the Commission has plenty of indication that new construction inhances the land value, rather than reducing the worth.

He told the Commission "We need to have as precise information as possible on this because in some instances, the Highway Commission may be paying damages to property owners when actually little or no damage is done."

The project will place special emphasis on the affect of limited and controlled access highways on adjacent land values.

In response to an appeal for funds to get the project underway, Commissioner James Mason of Laurinburg said the problem of right of way is becoming more and more serious and is taking increased amounts of badly needed construction funds.

"I am for any steps that may be taken to make right of way acquisition more efficient and I hope that the research project will result in reducing right of way costs wherever they are excessive," he said.

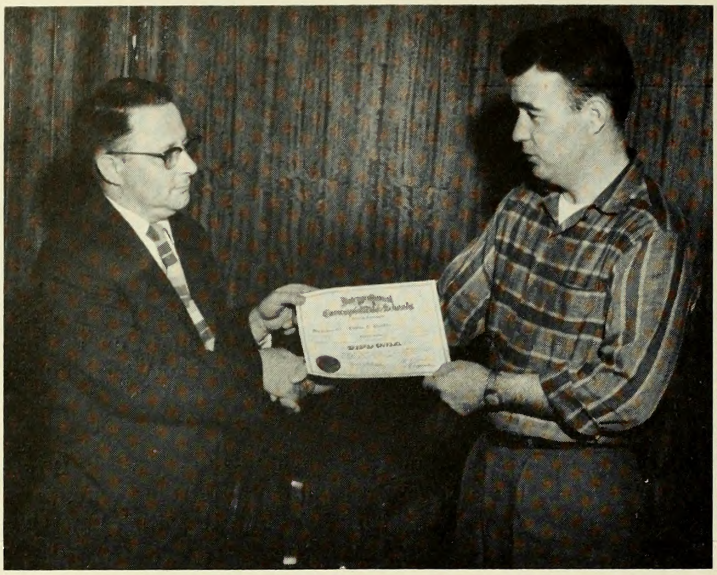
Following the statement by Mason, the Commission unanimously approved the new project, one of several now being planned.

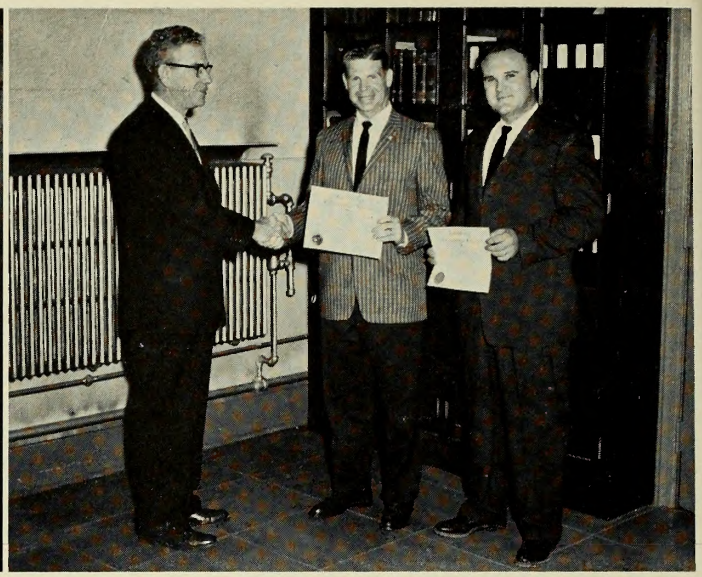
Highway Dept. Wins Safety Council Award

The National Safety Council has announced that the North Carolina Highway Department has been named recipient of the Council's Award of Merit for 1960.

The award was made on the basis of only 478 man days lost due to on-the-job injuries for a period of 100,000,000 man hours worked.

This is the second safety award which the Highway Department has won in the past three years. In 1958, the Department received the Safety Council's Award of Honor, the highest safety award presented by the Council. North Carolina is one of only six States which has received this award.





Director of Highways W. F. Babcock presents a diploma from ICS to Charlie Chambers, Highway Engineer II from the Roadway Design Department, in the picture at the left. A native of Kannapolis, Chambers graduated from Cannon High School. He attended State College for three years, bnt plans to get that Civil Engineering degree yet. Presently, he carries three credit hours of classwork a semester at State College, and has 43 honrs to complete the degree requirements. Tasker T. Kent and Johnny Meadows have good reason for those broad smiles in the picture on the right. They have jnst received ICS diplomas from J. E. Thompson, Head of the Department of Materials and Tests. Kent, center, a Materials Inspector II, is a Cary native. He gradnated from Cary High School and started to work for the Highway Commission as a Laboratory Technician in 1955. Meadows, right, is a Materials Inspector II also. A native of Onslow County, he graduated from Jacksonville High School. He lives at Rt. 2, Thomasville. Meadows is the first highway employee to complete a course successfully and receive reimbursement for one-half the cost from the Highway Department.

Employees Taking Extension Courses

It has always been the policy of the Highway Commission to encourage its employees to further their education. In-service training programs are offered in various areas from time to time and the taking of extension courses has been encouraged.

On January 1, 1959, the Commission adopted a tuition refund policy. Under this program, employees in approved engineering classifications became eligible for a refund of one-half of course fees upon satisfactory completion of extension work taken through the International Correspondence School, Scranton, Pa., or other approved schools.

At the present time, some 125 State Highway employees are currently enrolled in extension courses.

Contractors, Engineers Discuss Construction Procedures

(Continued from page 6)

the Highway Department construction personnel, private contractors and equipment and materials suppliers.

A full day was devoted to the workship sessions, for analyzing detailed problems of the road-building industry. The final general session heard reports from chairmen of the 11 study groups. The reports made specific recommendations which have been turned over to a joint Highway Commission-contractor committee which will in turn review them and pass them along to the Highway Commission for final consideration and/or approval to be written into the specifications booklet now being revised.

Topographic Mapping Commended

We are pleased to reprint a copy of a letter from Col. R. F. Davidson, Corps of Engineers, to Col. Harry E. Brown, Director of the N. C. Department of Water Resources:

"The topographic maps of the Outer Banks (Ocracoke Inlet to Cape Lookout), prepared by the N. C. State Highway Department and furnished as a part of the State's contribution toward the cooperative study, were excellent.

"When it is considered that photogrammetry is a relatively new activity of the Highway Department, the production of such high quality work is particularly praiseworthy.

"I hope you will convey to Mr. Cook, Mr. Page and members of their staff my sincere appreciation for their fine spirit of cooperation and for an excellent job of mapping."

THE QUESTION IS OFTEN ASKED, "WHO DETERMINES THE EMPLOYEES WHO WILL RECEIVE A MERIT INCREMENT"?

Employees for merit increments are selected by the Division Engineer or Dpartment Head who first receives recommendations from the employees immediate supervisor or other supervisory personnel who are acquainted with the individual employee's work. The names of employees selected are snbmitted to Raleigh and increments paid to the employees on the basis of the selections made by the Division Engineer or Department Head.

The Highway Commission Suggestion System is now in operation in all of the maintenance organizations, except Division 1 and parts of Divisions 2 and 4.

Within the next month, members of the Highway Personnel Office will be in these areas to complete the installation.

Plans are being made to install the system in Equipment, Bridge Maintenance, Construction, and other areas in the near future.

N. C. S. H. P. E. A. Association News

VOLUME 10—EDITION 4 MAY-JUNE

LEGISLATURE should be headed toward adjournment by the time you read this sometime in May. At this writing, consensus of opinion is for adjournment by the middle of June—final action must be taken on finance and appropriations prior to July 1, and ratified, in order for operations to continue when the new biennium begins July 1.

LEGISLATIVE PROGRAM for our employees has been an ambitious one, costing many millions of dollars. At the time of this writing, however, we are reasonably well assured of due consideration in the final analysis; contacts with Legislators have been made steadily day and night in the presentation of the joint program of the two Associations; we have appeared before the Join Appropriations Committee to present our case; briefs of the full program, with costs, have been filed with each Committee Member as well as with those on the Joint Finance Committee; consultations have been held with Governor Sanford to discuss the full program; consultations have been held with Dave Coltrane, Director of Administration, Charles Holleman, State Budget Officer, and William Copeland, the Governor's Legislative Liaison Officer. You will recall the Governor has never promised a specific percentage salary increase, but due consideration in the overall picture. Our friends realize that State Government depends on the operation of all agencies and departments, not just one group whether it be teachers or others, and it is our feeling still that a reasonable proportion will be maintained between anything granted us and those in education.

The budget recommends 3% general salary increases for all employees, at a total cost of $5,855,436 (almost 50% from Highway Funds)—we have requested 10% in addition to this amount and in addition to the regular increment schedule, with legislation introduced accordingly. This additional cost calls for appropriations of $10,024,000 from General Funds, $9,494,000 from Highway Funds for salaries; $694,000 from General Funds and $658,000 from Highway Funds for matching retirement money; a total additional appropriation of $20,870,000 for an additional 10% increase—this added to the original 3% recommendation brings the total figure to $26,725,436 for the 13% plus the line items for retirement in various agency budgets for the original 3% item. LONGEVITY PAY PLAN will cost another $500,000 — increments under the new salary schedules are about $12,-500,000 or an increase in cost of over $4,000,000 — retirement budget is increased about 40% this next biennium to approximately $45,000,000 for matching all employee members in the Retirement System—we are also asking increased travel allowance, costs not estimated at present—recommendations for reduction of working hours among prison personnel run almost $2,000,000 extra.

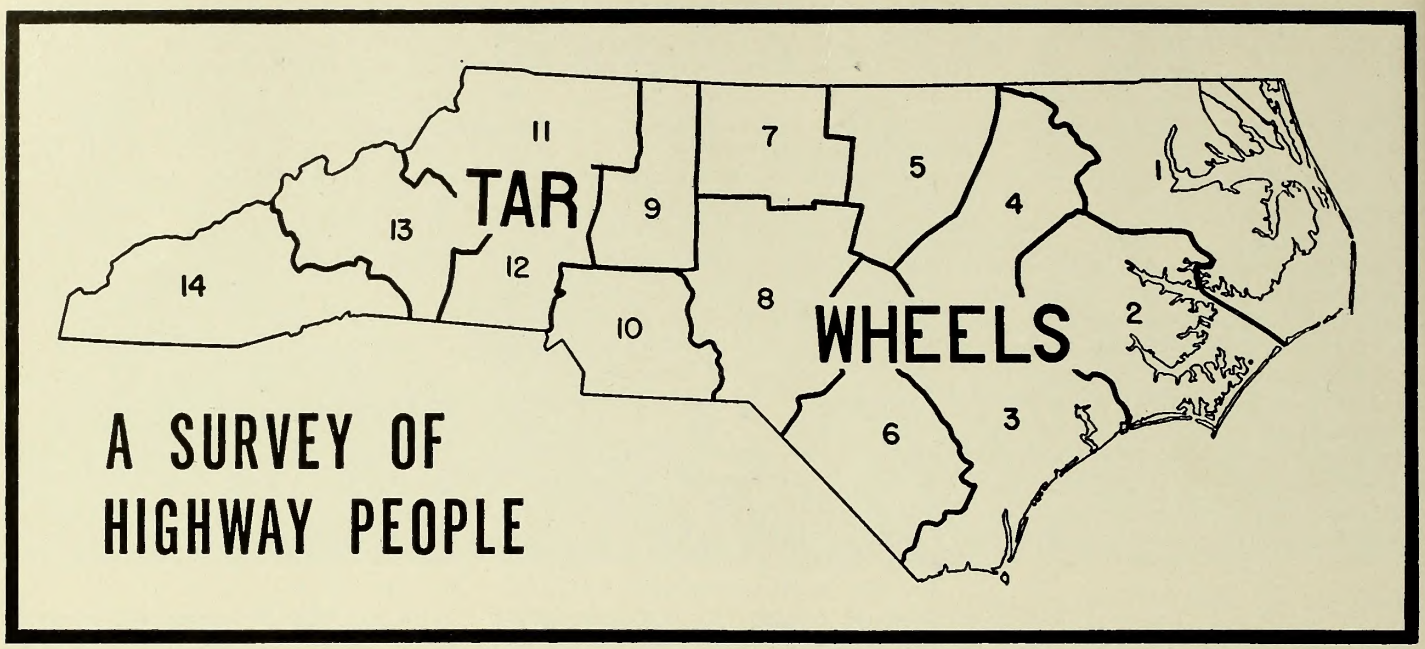
YOU CAN EASILY SEE that we are not talking in terms of a few cents, but in terms of millions of dollars just for maintaining some present items and small increases in other areas. Employees must realize what we are seeking —it is easy to figure a few extra dollars in one pocket on payday, but we must figure the entire cost that runs into astronomical figures, believe me. We will be most fortunate in the final legislation if we are granted a reasonable salary increase plus these other items we so earnestly seek. Every individual employee should be thankful for the work of the Association in his behalf, for the help of our friends in the Legislature, for the help of our friends who are administrative heads of our agencies and for the help of the Governor in whatever we gain. I WOULD CERTAINLY LIKE to be able to write that we had already won—I just hope when you read this that we have. It is not child's play working on such a program.

HIGHWAY REORGANIZATION Bill given favorable committee report; expected to be debated and should be history by the time you read this. HB#379 and SB#166 (identical) provide full-time Chairman as executive officer—18 Commissioners—a Director to be administrative officer—all these on appointed 4-year terms—Director, with approval of Commission, to appoint subordinate personnel — Controller to be appointed on a 4-year term basis beginning 7/1/61 by the Commission subject to approval of the Governor—provides appointment by Commission, subject to approval of Governor, of a Director of Secondary Roads—deletes provision that Commission must hold one meeting each year in an area east of Raleigh, an area between Raleigh and Hickory, and in an area west of Hickory. THIS IS A SWEEPING reorganization of the State's biggest agency, and quite naturally there is much speculation at the date of writing as to how the changes will affect each of us. We will just have to wait and see—and all of us be prepared to accept changes made, if any, and to continue the faithful and efficient work we have been doing. We have been through reorganizations before—I began work in 1931 and have seen changes to 5 Divisions, 10 Divisions, 14 Divisions, with Commissioners accordingly—I have seen, as many of you have, policy changes many times—the work continues by those who are charged with the responsibility, and it will continue after July 1, 1961.

INSURANCE COMMITTEE meeting in Raleigh on April 26-27 for review of experience this year to date and detailed discussions on possible plan changes for safeguarding our overall contract. Information will be furnished the field whenever posible.

ANNUAL UNIT MEETINGS will begin latter part of June — Chapters should meet prior to the Units—collection of annual dues will begin in June. Let's all band together with a resolve to continue membership, solicit new membership, for the good of all employees. Make every effort to secure the membership of ALL EMPLOYEES—they need us as badly as we need them. A cooperative effort is what counts, and everyone should realize by now the value of this Association—count your blessings, and be honest enough to admit that many of them would not be yours to count if it had not been for the work done by your Association—work in many instances done when you did not realize it, and which in many cases could not be publicized.

I hope to meet many of you again during our summer meetings — and with good news in reviewing our gains in the 1961 General Assembly. — Otis Banks, Secretary.



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

PERSONNEL—*Dot Medlin* took in the sights, along with some good Broadway shows, with two girl friends in New York City the first of May. *Bob Smith* recently moved his wife and baby into a newly-purchased home in Cary. *Sam Badgett* took a fast plane trip to Atlanta, Georgia to attend a Public Personnel Association Conference April 19-20.

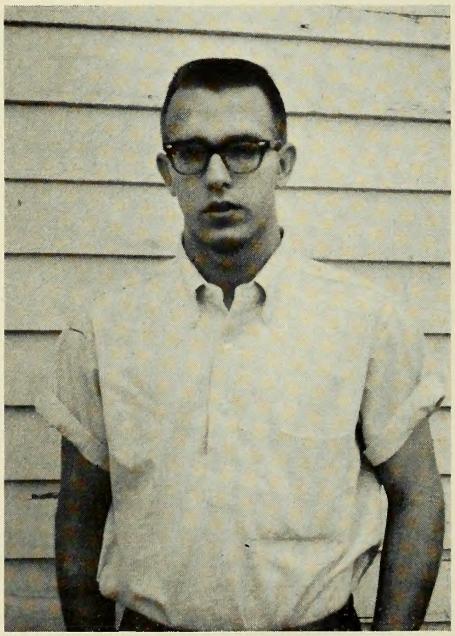
MAINTENANCE—*A. R. Cherry* visited Cape May, New Jersey the second weekend in April.

DIRECTOR'S OFFICE—*Mary* and Herb *Tripp* motored down to Wilmington the weekend of April 8 to attend the Azalea Festival. Also they took several days off to visit their parents in Morristown, New Jersey, whom they hadn't seen in a year.

FEDERAL CONTACT — Friends from Mobile, Alabama visited the *R. R. Trevathans* the third week in April. Later, the Trevathans, with their friends, motored to Washington, D. C. for a short visit. *Shanks Bradsher* recently transferred from Bridge Design to Federal Contact as a trainee.

BRIDGE MAINTENANCE—The *K. R. Scotts* vacationed the first week in April in Florida and several other Southern States. *Majorie Massengill*, with friends, attended the Wilmington Azalea Festival the weekend of April 8. Our deepest sympathy is extended to the families of *I. J. Berry* and *P. E. Hairr*. Employed with the Bridge Department since 1949 and one of our foremen since 1959, Mr. Berry died March 18. Mr. Hairr was working on a bridge when he fell and drowned March 29. He, too, had been with the Department since 1949.

LABORATORY—A speedy recovery is wished *L. W. Roper* who was recently hospitalized and is now recuperating at home. Good luck to *S. W. Hales*, Chemical Lab., who recently resigned. *E. A. Jackson, Jr.* is his replacement. Our loss is "Uncle Sam's" gain, since *Douglas Chappell* recently resigned to enter the armed forces. *F. R. Horton, Jr.* replaces Chappell. *B. B. Phleger*, former Soils Lab. employee, decided to leave the Department to resume his college education. Welcome to *Charles B. Whitley* and *P. L. Gilbert*, new Soils Lab. employees. Wedding plans have been announced for Miss Jo Anne Hinton and *Al Lewis*. Al is a Clerk in the Dept. of Materials & Tests. The wedding date has been set for June 18, in Middlesex.



Richard Lindsay Sugg, 17 year old senior at Garner High School will graduate in June.

Richard is the son of Claude Sugg in the Reproduction Department.

EQUIPMENT—Congratulations to *J. W. Upton*, Ass't State Equipment Engineer, who has a new granddaughter, Leslie Linn Freeman. *Shirley Pearce* transferred to the Equipment Depot March 25. Employees are glad to have *Mary Jane MacGillvray* join the force again on a temporary basis. Welcome to *Judith Ann Cahoon* of Englehard, who joined the clerical staff April 4. *George A. Brinkley* attended the Shrine Directors Association of North America in Tulsa, Oklahoma.

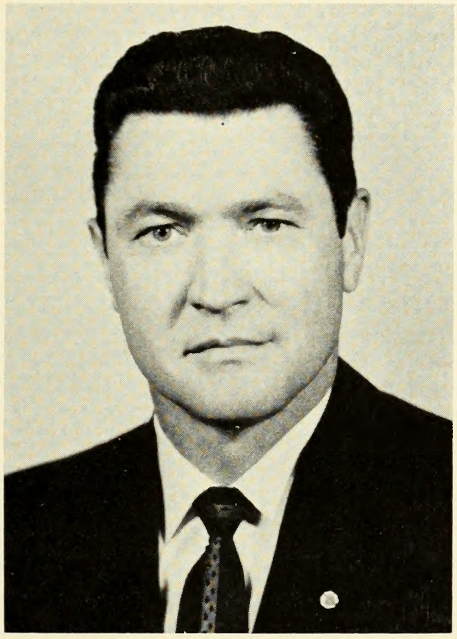
LOCATION—New faces in the Department are: *Wilbur R. Cook, W. Donald Smith* and *John Ledbetter. Lloyd Cook, Edgar Page, R. J. Wilson* and *John D. McDonald* attended a recent meeting of the American Society of Photogrammetry and the American Congress of Surveying and Mapping in Washington, D. C. A speedy recovery is wished *George A. McKinley* who recently has been a patient at Rex Hospital and is now recuperating satisfactorily at home. *Frances Smith* reports a most delightful trip to New York City March 16-19, sight-seeing and attending some of the most popular Broadway shows. Our deepest sympathy goes out to Frances who lost her father Easter

Sunday. *Jo-Ann* and Wilbur *Turner*, with little son, Alan, recently enjoyed visiting Wilbur's parents in Elizabeth City for a weekend. On another recent weekend, they motored to Winston-Salem to see Jo-Ann's folks.

PHOTOGRAMMETRY — Employees extend best wishes to *Willie Hobbs*, State Cartographer, who retired after 39 years of faithful service with the Commission, and state that it was a pleasure and privilege to have worked with Willie. *Richard Pawlikowski* has taken over Willie's duties and paraphernalia, and has moved into the Photogrammetric Drafting Room. Good luck Dick! *Richard McCabe* has been trying his luck at following the dot in the Kelsh booth. *Edgar Page* and *John McDonald* joined *Lloyd Cook* and *Bill Wilson* in a trip to Washington, D. C. to attend the Photogrammetric Convention for meetings and a view of the displays of new equipment. Photogrammetry is proud of the letters of commendation to the Department, received recently on the Outer Banks Project, and especially the high praise by the Corps of Army Engineers on the use of photogrammetry. Over the Easter holidays, the Photogrammetric section scattered to the four winds. *Pete Marchetti* headed for Fort Lauderdale, Florida, and a handsome sun tan; *John Isley* escorted his father-in-law and brother-in-law on their first visit to John's home town, New York City; *Bill Parker* visited his family in Asheville; and *Robert Moore* went home to Marion to visit his parents.

LEGAL — Co-workers were sorry to lose *Shirley Capps*, who transferred to the Department of Administration. Welcome to *Beth Atkinson* of Orrum, who joined the clerical staff April 17. Best wishes to the former *Miss Polly Starbuck*, who was married January 1 to Battle Robertson of Clayton. The Robertsons are making their home in Florida. *Mary Lib Green* and husband, Brodie, attended the Azalea Festival in Wilmington the weekend of April 8. *James Bullock* went to Augusta, Georgia to attend the Golf Tournament April 6-9. The *Harrison Lewis'* also motored down to Wilmington to attend Azalea Festival activities.

ROADWAY DESIGN—*Randy Chandler* spent the weekend of April 22 at his parents' cottage, Myrtle Beach, S. C. Mr. and Mrs. *Howard J. Critcher* vacationed in Florida for a week in April. *William E. Bissette, Jr.* and *Ralph F. Owens* are new employees in the Department. Good luck to *Donald Holloway*, who transferred April 14 to the Adjutant General's Office, Department of Justice. The stork was busy in this Department during February, March and April. A son, Clayborn Douglas, was born April 7 to Mr. and Mrs. *George H. Holland, Jr.* Mr. and Mrs. *Walton J. Page* are parents of a new son, Walton Johnson Page, Jr., born February 28. A daughter, Lisa Catherine, was born to the *Ivan G. Todds*, April 22. Mr. and Mrs. *Robert M. Kirkpatrick* announce the birth of a son, Robert Clair Kirkpatrick, March 20. And—it seems the boys are winning—Mr. and Mrs. *Henry C. Clegg, Jr.* are the new parents of a son, Michael Henry, born March 10. Congratulations to all of you!



Charles Lassiter, Director of the Raleigh Breakfast Optimist Club, just recently was awarded a paid-up international life membership in any organized Optimist Club throughout the world.

Awarded the honor for his many fine achievements as Boys' Work Chairman of the Raleigh club, Charles directed the following activities: Youth Appreciation Week, an Oratorical Contest, Bicycle Safety Week, organized a Junior Boys' Club in West Raleigh with 28 Charter members, and was coach of the boys' baseball and basketball teams.

A veteran of five years' service in the Enropean theatre during World War II, Charles received the Purple Heart.

He has been with the Highway Reproduction Department since 1946, and lives at 2829 Bartmettler Street with his wife the former Dorothy Clifton.

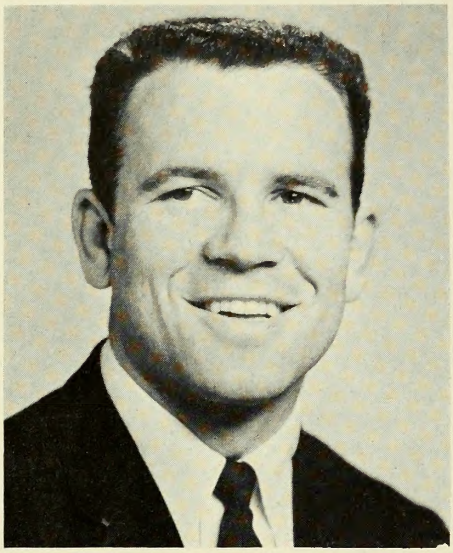
PURCHASING — *Charlotte Cameron* visited friends in Trenton, New Jersey and Philadelphia, Pa., recently. *Louise Shepherd* and husband, James, enjoyed a recent weekend visit with relatives in Washington, D. C. *Lucia Sloan* and husband, Ben, followed the golf circuit to Wilmington, and Augusta, Ga., on consecutive weekends. Everyone is going to miss Lucia's smiling face, since she resigned to return to full-time housekeeping. It's good to have *Vance McDaniel* back at work after a recent illness. *Martha May* and husband, Jeff, spent a recent weekend with her parents in Troy. *Leona Sidbury* reports she and her family had a delightful trip to Wilmington, when the azaleas were in full bloom. Welcome to *Sara Gault*, new steno II to Mr. Ray, who transferred from Planning April 10, as Lucia Sloan's replacement. *Charlotte Cameron* resigned May 1 to transfer to the Department of Conservation and Development's Community Planning Division as a Steno II. Good luck, Charlotte.

CONSTRUCTION — Best wishes to *David Barber*, who resigned to accept employment in Monroe, N. C. Welcome to *Jean Pearce* of Franklinton, David's replacement. A speedy recovery is wished *Mary Murphy's* brother, who is ill in Rex Hospital.

SAFETY—*Ann Sterling* is proud of the many honors her daughters have received recently. Lesley, a Junior at Needham Broughton, was inducted into the National Honor Society, putting her among the top 2% in the Nation. And—during the month of May—Lesley is serving as a Page in the Senate of the General Assembly. Suzy served as a Page in the same capacity during the month of March and just recently was named a majorette at Broughton High. Ann took in the sights, sounds, speeches and general excitement of the Jefferson-Jackson Day Dinner, held recently at the State Fair Arena, and reports the lobster Newburg was most delicious.

BRIDGE — Congratulations to the following new home owners: *Jim Wilder*, Route 5, Raleigh; *Eleanor Taylor*, 917 Weston Street; *Bob Hale*, Route 5, Raleigh; and *Rhinehardt Martin*, 3524 Apache Drive. *Pete Spivey* and *John Smith* are temporarily located on the 3rd floor, attending IBM School. *Pat Thompson* recently transferred to Bridge Location. *Olin Meeks* transferred from Bridge Location to Bridge Design. Both are permanent employees. *R. S. Wicker* reports his daughter, Beverly, is practice teaching in Wilmington, and will graduate from Carolina in June. The following members of the staff attended the Third Annual State Highway Conference at State College March 28-29-30: *Landis Temple, George Parkin, John Wiggins, W. S. Winslow, L. C. Dillard, R. E. Noblin, Max Collins, Sam Usry*, and *Ken*

Horton. Congratulations to Mr. and Mrs. *Silvio Santo Tomas* upon the birth of a daughter, April 4; to the *Gus Saparilas'* on the arrival of a son, April 1, named Nicholas Timothy; and to Mr. and Mrs. *Walter B. Baker* upon the b'rth of a little girl, Donna Sharon, April 8, in Rex Hospital.



Doug Matthews, temporary Draftsman II, who works part-time while attending State College, has made quite a name for himself in college wrestling at State by just recently copping the championship in the 115-pound class of the Carolinas AAU Wrestling Tournament. It was quite a triumph for Doug, who had finished third his sophomore year and second his junior year, in this same event. To take the title, he pinned a Davidson wrestler, Barger, in 2:48 of the first round.

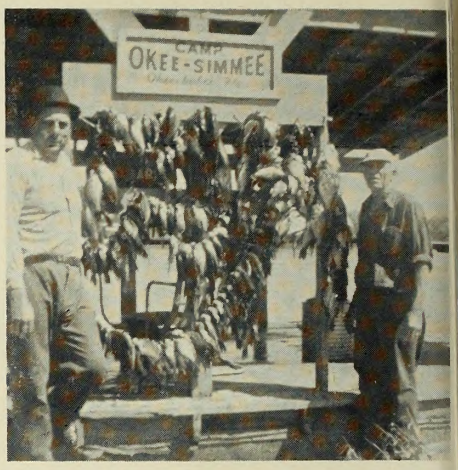
Doug also coached the N. C. State School for the Blind wrestling team this year, and several of his boys won honors.

He is the son of Mr. and Mrs. J. G. Matthews of 1109 Herring Avenue in Wilson.

PLANNING—Wedding bells will ring June 4th for *Bruce Williams*, who will marry Carolyn Cole on that date in the Presbyterian Church at Carolina Beach. *Doris Hall* and her family are proud of their new home on Hodge Road in Knightdale. *Roger Edwards* spent Easter weekend in Charlotte. Employees miss *Sara Gault* who recently transferred from Mr. *Farmer's* office to Mr. *Ray's* office in Purchasing. Two new employees in Mr. *Jay's* office are: *James R. McNeill* of West Jefferson, Draftsman I; and *Carey Hunter* of Raleigh, Research Analyst II. (Mapping Section) Mapping welcomes three new temporary employees: Mrs. *Rachel Gregory* of Dunn, Clerk; *Vilas Keglers*, Draftsman; and *Guy Blanton* of Sylva, Draftsman II, who will return to college this fall.

SECONDARY ROADS — *Carol* and Benny *Helton* have just recently moved into a lovely new 55-foot mobile home. *Sally Shimer's* husband, Colonel Clarence B. Shimer, has the distinction of being the first blood donor at the new Wake County Memorial Hospital.

RIGHT OF WAY—Employees enjoying the Easter holiday and their destinations: *Barbara Amick* and husband, Bob,—Macon, Georgia—to see Bob's brother; *Rose Ann Harris*—Carolina Beach—with her family; *Bobby Heath* and family—Fayetteville—to visit Mrs. Heath's family; *Jack Batchlor* — Charlotte — to see his mother; *Harold Davis*—Wilmington — to visit friends; *Warner Powell* and family —Momeyer — to see his parents and — Spring Hope — to visit Mrs. Powell's parents; *Collis Lewis* and family—Bethel —to see his wife's family; *John Honaberrier* and family—Durham—to be with his aunt; *Bob McCoy* and family—LaGrange — to visit Mrs. McCoy's family; *Bill Tomlinson* — Wilson — to be with his parents; *John Fields* and wife — Wilmington — to se Mrs. Field's family; and *A. Z. Williams* and family—Laurinburg—to visit his mother. *Celia Truelove* and husband, Jackie, report a very exciting Sunday recently at the Easy Street Drag Strip near Benson, watching the races. *Cliff Carroll* and his wife had all of their children and five grandchildren home for Easter. To celebrate the occasion, they held an Easter egg hunt for the grandchildren. Seen strolling along both Carolina and Wrightsville Beaches on Azalea Festival weekend were: *Rose Ann Harris*, *Eleanor Brantley* and *Harold Davis*, with their sunglasses and sun oils, getting ready for a nice summer tan and some fine parties. *Warner Powell* took a week off in March to screen in his porch and reports are it is a fine job. *Eleanor Taylor* and her family recently motored down to Southern Pines to meet friends for the thrilling Stonybrook Steeple Chase. They enjoyed a delicious picnic lunch, plenty of exciting conversation and, of course, the races. That night they attended a barbecue given by friends. Right of Way has a basketball star in its midst. *Bill Tomlinson*, who plays for Wilson Home Builders and Supply Basketball team, helped his teammates defeat Raleigh's Whitaker Park All-Stars by one point at the end of the second overtime to win the Gold Medal Tournament, held recently in Rocky Mount, and sponsored by the Y. M. C. A. Congratulations Bill and fellow teammates! Highway Department employees, who recently viewed the "Miss Cary Beauty Pageant," thought *Eleanor Brantley*, a contestant, looked "out-of-this world" in her beautiful blue evening gown and striking black bathing suit!



Jay Smith and Dwight Baker pose with a portion of their catch of speckled perch taken recently from Lake Okeechobee, Florida. Their party of 14 caught approximately 3,000 perch, which is a good "mess" in anybody's book.

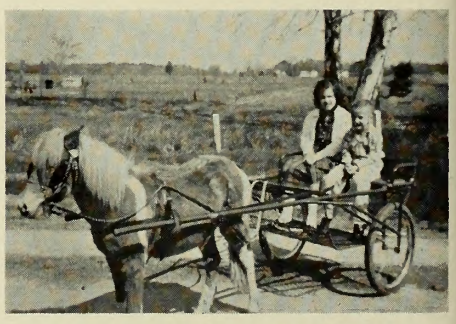
DIVISION ONE

By ROY E. WEST

Division Correspondent

CONGRATULATIONS to Machine Operator *Lee Brittle* of District 2, who recently completed 25 years of continuous service. Best wishes go with Maintenance Foreman *J. L. Collier* of District 2, who retired May 1 after 40 years of service. His fellow employees will miss him but hope that he enjoys a well-deserved rest.

SYMPATHY is extended to the family of *A. D. Castellow*, who was killed near Plymouth when the vehicle he was driving went off the road and struck a tree. He had worked for the Highway Department about 22 years and at the time of his death, was District Mechanic at Plymouth. Our sympathy is extended also to the



GOING FOR A JOY RIDE—Stan and Vickie Ricks are the proud owners of this pony and cart. They're the children of Maintenance Yard Tradesman and Mrs. S. T. Ricks of Seaboard.



District Engineer W. F. Sessoms, right, presents a certificate and 35-year pin to George D. Asbell, Maintenance Foreman in Chowan County.

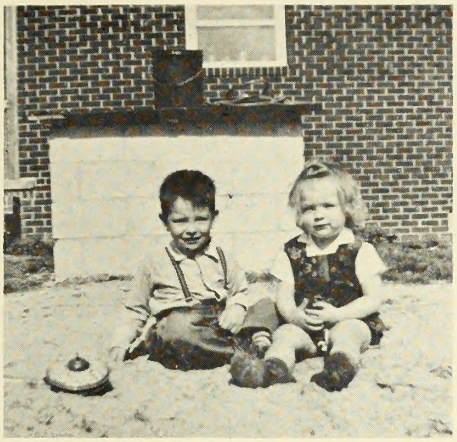
family of *Charlie L. Perry*, who died at his home in Spot. He had worked in District 1 for about 10 years.

GET WELL WISHES are extended to *J. L. Collier*, convalescing following hospitalization at McGuire Hospital, Richmond; *Gurley Lawrence*, patient at Roanoke Hospital; *E. B. Leggett*, confined to Bertie Memorial Hospital; *George C. Parker*, who is at home sick; *B. C. Smith*, convalescing following hospitalization; and *J. W. Wheeler*, who is confined to his home due to illness. *J. E. Pritchard*, *Robert H. Davis* and *W. H. Moseley* are back at work after illness.

IT'S A BOY for *Wilton* and Virginia *Bray*. Dad is with the Construction Department at Elizabeth City.

VACATIONERS have included *William G. Vinson*, who spent several days in Wilmington, Del., visiting his mother, brother and sister; and Maintenance Foreman and Mrs. *Jack Spruill*, who were guests of her sister in Charleston, S. C.

GREENVILLE was the site of the Construction Department Conference, which was attended by the following from Division 1: *W. N. Spruill, E. H. Baggs, R. E. West, W. H. Coleman, W. J. Starr,*



Linda Sue, 2, and her three-year old brother, L. D. Webb, Jr., are not the least bit camera shy as they take time out from play to pose for the photographer. Daddy is Right of Way Agent for Division 1.

R. J. Peele, Jr., W. M. Smith, W. T. Daughtry, J. W. Wheeler, J. R. Felton, M. G. Carawan, D. L. Cobb, H. L. Davenport, R. P. Davis, R. F. Hall, H. C. Griffin, D. W. Miller, A. L. Moore, H. B. Payne, B. R. Rogers, E. F. Spruill, C. P. Vincent and *L. L. Askew*. Equipment Shop Foreman *D. E. Snow* was in Galion, Ohio, recently for the service school on Galion Motor Graders. *W. N. Spruill, E. H. Baggs, W. H. Coleman, C. P. Vincent, R. J. West, H. B. Payne, R. J. Peele, Jr., W. M. Smith, W. J. Starr, S. M. Freeman* and *W. T. Daughtry* attended the recent Highway Conference in Raleigh. Highway Inspector *W. W. Prescott* of the Construction Department has been transferred temporarily to the Seventh Division at Graham.



Cute little Penny Griffin, age 3, is all dolled up in her Sunday best. She's the daughter of Maintenance Foreman and Mrs. H. D. Griffin of Williamston.

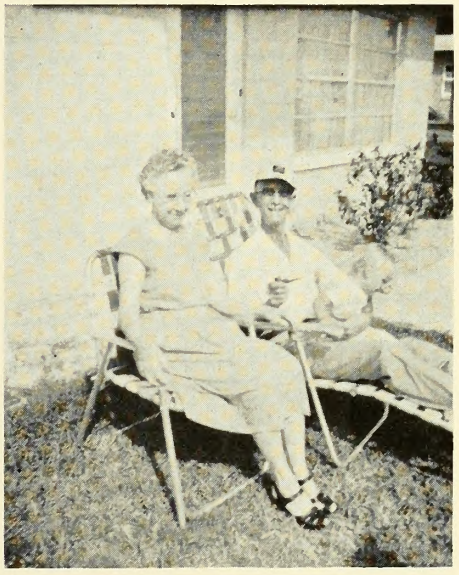
DIVISION TWO

By ROY D. FRANKS

Division Correspondent

FLORIDA was the vacation spot chosen by Mr. and Mrs. *H. F. Burns, Jr.* He is with the Right of Way Department.

CONGRATULATIONS to Mr. and Mrs. *Kirby Rouse*, who recently adopted a four months old boy, Allen Durant Rouse; and to the *James Bruce Newmans*, who have moved into their new home on Pink Hill Road.



Taking it easy in the warm Florida sun are Mr. and Mrs. Asa V. Moore. The Moores visited their son and his family in Clearwater while on a vacation which covered more than 2,500 miles through the southern states. Mr. Moore retired the first of the year with 35 years of highway service to his credit. They make their home in Winterville.

A VISIT with his mother was enjoyed during the Easter holidays by Mr. and Mrs. *J. Q. Adams*.

OUR SYMPATHY is extended to *P. L. Fields*, garage employee, whose brother, Tommy, died recently.

CRAVEN COUNTY Prison Unit located at New Bern has been closed to make way for a new hospital, and Unit Captain F. W. Jacobs has been transferred to the Greene County unit.

PITT COUNTY GARAGE was the scene of the barbecue supper help by Pitt Unit of the Employees Association. Guests included Mr. and Mrs. Otis Banks of Raleigh and entertainment was furnished by the Blackjack Male Quartet.



Mrs. Ruby Harrison is the pretty new addition to the secretarial staff in Division Two. She replaces Mrs. Merle Bazemore who resigned recently.

DIVISION THREE

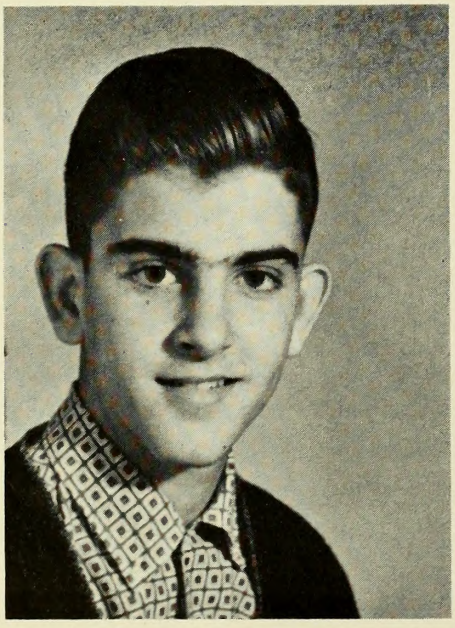
By IRENE C. HEWETT

Division Correspondent

CONGRATULATIONS to the *Jimmy Boneys* on the birth of a daughter. Jim works in District 2. It's a girl also for Mr. and Mrs. *David E. Gurganious* of the Landscape Department, whose first child, Brenda Carol, was born March 17. The *Tommy Preston's* first child is a girl also and they've named her Susan Marie. Tommy works in the Construction Department at Wilmington.

GOOD HEALTH and much happiness is wished for Maintenance Foreman *G. S. Simmons* of District 2, who retired the first of April after more than 30 years of service with the Highway Department.

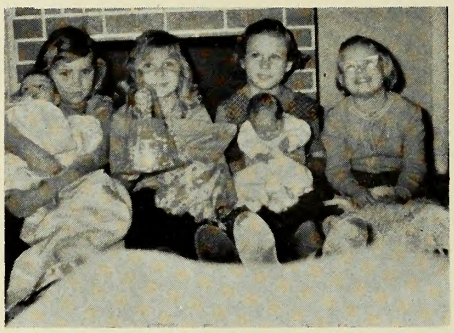
DEEPEST SYMPATHY goes out to the family of *Perry E. Hairr*, of the Bridge Department, who was drowned while at work March 29th.



Edward Straughan, son of Mrs. Nell Straughan, secretary in the Division 3 Right of Way Office, was the only selection from his school, Chestnut Heights, to the All Star Basketball Team.

IT IS GOOD to have *D. L. Carter* back with us after being out for several weeks due to illness. Major A. B. Whitfield, Prison Supervisor, is at home suffering from a case of the mumps which the children brought home from school. Equipment Superintendent *W. V. Coley* is reported much improved after a recent stay at Veterans Hospital in Fayetteville.

WE ENJOYED a recent visit in the Clinton office from *T. T. Carroll*, who used to be Road Maintenance Supervisor. He gave a glowing report of a recent trip which he and Mrs. Carroll made to Florida.



Maintenance Foreman J. W. Evans of Wayne County, who has been with the Highway Department for 37 years, is quite proud of this group of youngsters, for they are his grandchildren. They are: Gail Evans, nine, holding her sister, Carolina, age eight weeks, and their seven-year old sister Joan; also Kathy Boekenhaver, nine, holding her three-week-old brother Johnny, and on the far right, their sister, Terry, who is five years old.

RECENT PROMOTIONS have included: *Jesse B. Bowden*, mechanic, to Highway Inspector; Auto Parts Clerk *W. L. Reynolds*, to Mechanic Foreman, replacing L. R. Beasley who retired. Mechanic Foreman *Lacy Johnson* attended the Galion Motor Grader School at Galion, Ohio, recently.

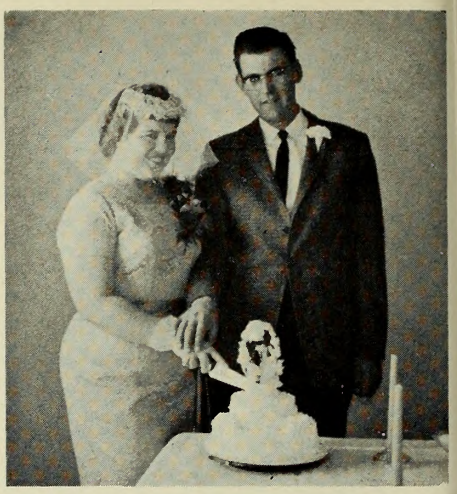
DIVISION FOUR

By JERRY BOYKIN

Division Correspondent

PROOF POSITIVE that *Willie Sykes* of the Sign Department is growing younger all the time—he has just recovered from a bout with the "Red" measles.

WELCOME BACK, *Paul Peedin*, Sign Helper with Traffic Services, and Machine Operator *Raymond Bailey*. Both returned to work recently after duty with Uncle Sam. A welcome is extended also to *Bobby Bissette* of Construction and *Wade Brooks*, Highway Inspector, who have been transferred to our Division. Bobby was



Mr. and Mrs. Joseph R. Dillingham are shown cutting the wedding cake following their marriage March 17. She is the former Joyce Marie Jackson, daughter of Machine Operator and Mrs. Grover Jackson of Mount Olive. The bride is a graduate of Mount Olive High School and the Goldsboro School of Nursing and was on the staff at Wayne Memorial Hospital prior to her marriage. The groom, who is the son of the Ford Dillinghams of Denver, Colo., recently completed a four-year tour of duty with the Air Force. The newlyweds are making their home in Denver.

transferred from Division One and Wade from Division Five. Good luck to Machine Operator *Willis Nowell*, who has resigned to accept other employment.

HOME FOR THE HOLIDAY was Mildred Dawson, daughter of Assistant Division Engineer and Mrs. *R. W. Dawson*, and a student at Woman's College in Greensboro. Division Engineer and Mrs. *E. P. Koonce* visited relatives in Jacksonville while Landscape Supervisor and Mrs. *G. T. Wilkins* traveled to Portsmouth and Hampton, Va., for a visit with their son and daughter and Mrs. *Betty Simon* and husband Don visited with relatives in Wilmington.

IN RALEIGH for the Highway Conference were the following: *E. P. Koonce, R. W. Dawson, D. B. McMichael, H. P. Taylor, Steve Barnes, Fred Hettinger* and *Fred Boone.*

IT'S GOOD TO SEE *Amos Bass* of the Prison Department, *Willie Sykes* of the Sign Department and *Elmon Lane* back at work after illness. *J. J. Matthews* of the Traffic Department is recuperating following surgery and we hope he will be able to return to work soon. Others who have been on the sick list include: *Roy B. Spain*, Mrs. Ruth May Anderson, Roger Lee, son of *J. L. Hyde; Cicero*

Nethery; Mrs. Mazie Lee Edmondson and Ann, daughter of *J. E. James.*

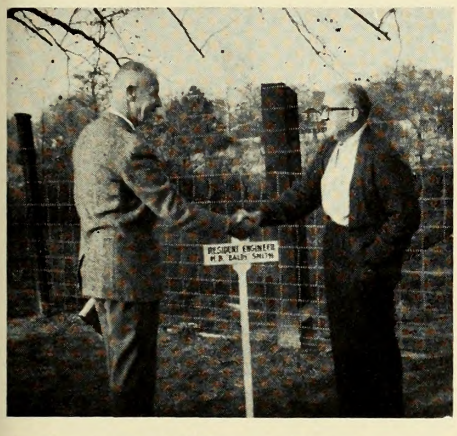
CONGRATULATIONS to *J. B. Crawford* of the Sign Department in Wayne County, who has moved into his new home at Dudley; and to Professor *James E. Cooper,* who has completed teaching a series of classes on Equipment Operation and Care in Halifax and Edgecombe Counties.

DIVISION FIVE

By PEGGY B. BRIGHT

Division Correspondent

THE REASON for *W. G. Privette's* big smile is little Hazel Charlene, who arrived in February to brighten the Privette home. There are also smiles on the faces of *W. B. Grady* and *Vencen Morton.* Grady's reason is the new loader which was issued to him recently, and Vencen has a new service truck.



There are parking problems even at the Highway Department these days. Just to make sure H. B. Smith, Resident Engineer at Fayetteville, has a place to park his car, Assistant Chief Engineer Ivan Hardesty presented him with a personalized parking space.

CONGRATULATIONS to Mr. and Mrs. *William D. Campbell* and daughter, who have moved into their new home at 840 Brigham Road, Raleigh.

THE HOLIDAY was enjoyed by the J. A. Halls and Danny, who went to Charlotte, and by Division Engineer and Mrs. *J. W. Jenkins* who visited the azalea gardens in Wilmington. *Harold G. Wheeler* enjoyed a recent trip to Florida.

DOES ANYONE know the real "Mud" Dauber?" He's *Pender Woodlief* in disguise!

THOSE on the sick list have included: *L. R. Perry, L. L. Pippin, W. L. Poole, W. P. Pearce, Leo G. Weary, W. C. Fowler and R. G. Williams.* We trust that all are recovered and back at work by the time you read this

CONDOLENCES to *George S. Bailey,* who lost his father recently.

DIVISION SIX

By STEVE AMMONS

Division Correspondent

SYMPATHY is extended to *J. A. Ward* of Columbus County, in the recent death of his father, and to Mrs. C. B. Clark, whose husband died recently. Prior to his retirement several years ago, Mr. Clark worked with the Equipment Department in Robeson County.

AN EARLY SPRING vacation was enjoyed by the *F. W. Hammonds,* when they spent a recent week in Florida.

ADDITIONAL buildings at the Columbus County Prison Camp are now completed.



Helen M. Faircloth, daughter of Road Oil Foreman and Mrs. T. G. Faircloth, will graduate this spring from Stedman High School.

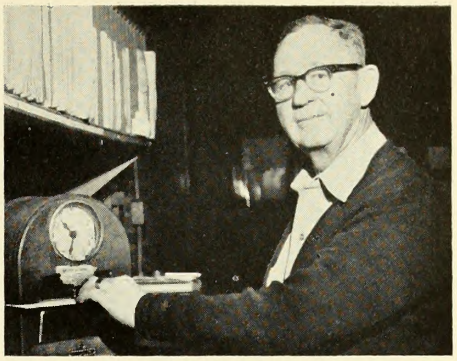
DIVISION SEVEN

By P. L. WELCH

Division Correspondent

WELCOME to *Lois Godfrey Hodges,* Right of Way Secretary, married recently to a Greensboro resident, Charles F. Hodges.

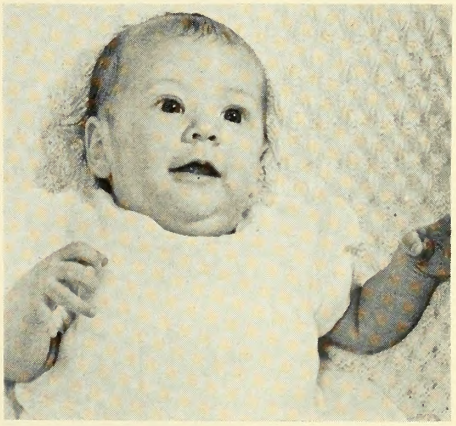
A SPEEDY RECOVERY is wished for Mrs. *Carl F. Vestal,* who suffered a broken leg recently. Her husband is Maintenance Foreman in Guilford County. Also, to Mrs. Laura Phelps, mother of *Leo T. Phelps,* Guilford County Maintenance Foreman, who is a patient at Cone Hospital.



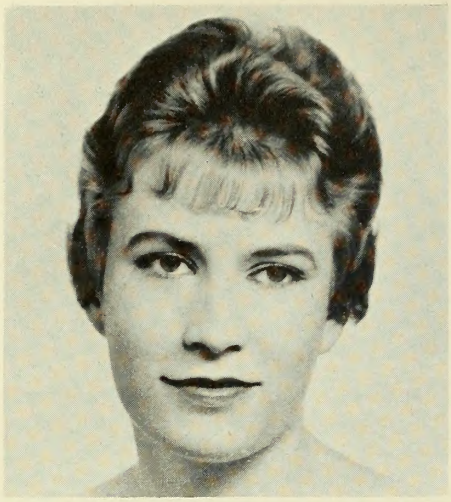
Jorman Fields is shown retiring from the Highway Department after more than 30 years of service. He began his career in 1931, at the Lab in Raleigh, under the supervision of Billy Hawkins and was transferred later that year to Fayetteville as a field mechanic under R. D. Benson. At the time of his retirement, he was serving as a parts clerk in the Division Shop stock room. At a dinner in his honor, fellow employees presented Mr. Fields with a watch. He and his wife, the former Anne Flowers, live at 106 Pond Street, Fayetteville.

DRIVER TRAINING classes were conducted recently in Guilford and Rockingham County, by *Harold W. Joyce,* who attended the recent course held in Raleigh.

SYMPATHY is extended to *John S. Webster,* Clerk in the District Office, who lost his brother recently.



Making her camera debut at the age of two months is Cynthia, daughter of Mr. and Mrs. J. Harold Mitchell. Cynthia was born December 15. Her daddy is a Maintenance Foreman in Rockingham County.



Mr. and Mrs. Sam Sidney Anderson of Burlington, Rt. 5, announce the engagement of their daughter, Joyce Marie, to Lewis Glendale Dickey, son of Mr. and Mrs. Lacy Graton Dickey of Burlington, Rt. 3. The wedding is planned for July 2 in Long's Chapel Christian Church. Joyce will graduate from Woman's College in June, with a degree in home economics. Her fiancee attended Elon College and is employed by R. J. Reynolds Tobacco Company in Winston-Salem. Mr. Anderson is a Machine Operator in Alamance County.

DIVISION EIGHT

By VIRGINIA S. WILLIAMSON

Division Correspondent

IT'S A BOY for Mr. and Mrs. *Russell Webster!* Dad is with the Construction Department at Siler Ciy. Also sharing in this happy news is *Crutchfield Webster*, the proud grandfather, who is Maintenance Yard Assistant in Chatham County.

WE HEAR *Bob Southall* and *Bobby Thames* of Laurinburg are spending quite a bit of their spare time bowling. Bob reports that he is bowling a good game, but no report on how Bobby is doing.

SYMPATHY is extended to *E. T. Brame*, whose mother died recently. His friends look forward to his return to our Division from Hillsboro. We regret also to report the death of David Maddox, former highway employee, and brother of *Alex Maddox* of Road Oil.



That's Materials Inspector Douglas Edge of Division Eight, whose head is hidden by his young son, Bill.

ARMY LIFE seems to be agreeing with Eddie Darden, son of our District Engineer. Since entering the service March 1, he has been stationed at Fort Jackson, S. C., and was home on leave visiting his parents recently.

WELCOME to *Sarah Edwards*, secretary in Right of Way. She lives in Aberdeen with her husband, Wilbur, and two attractive daughters, Norma and Linda. She replaces *Lois Godfrey*, who resigned to become Mrs. Charles Hodges. The wedding took place March 19 at her home in Jackson Springs. The couple moved to Greensboro and we understand Lois went right on being a Right-of-Way secretary, along with becoming a housewife.

AN ENJOYABLE TRIP was reported by *Gentry Morgan*, who along with his parents, visited New Bern and Tryon Palace recently. We are glad to report that *Henry Jordan* came through his daughter Susan's recent case of measles in fine shape.



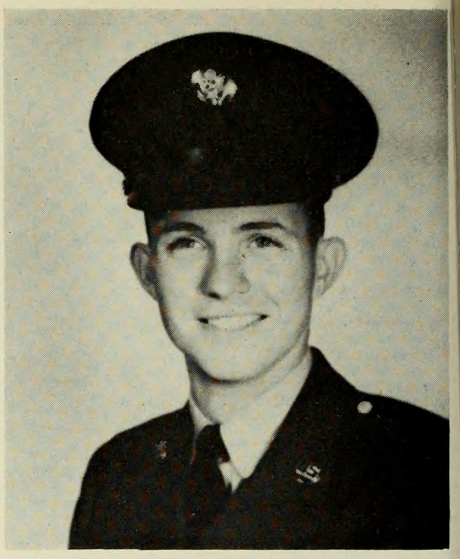
Mr. and Mrs. C. Edward Estridge are shown here with their young son, Edward Ray. Ed works with the Equipment Department in Division 10.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

THERE ISN'T much need for calendars in the Rowan County Maintenance Department to show the seasons of the year. All you have to do is just watch a certain employee named *Bill Graham*. When he gets off, you know it is either Spring or Fall. In the Spring, he gets off to "sow peas" and in the fall, to "pick peas". The only catch is that he sows and picks with a fishing pole and shotgun!



Andrew M. Thompson, Jr., son of Mr. and Mrs. "Buck" Thompson, is currently serving six months in the Army, stationed at Ft. Jackson, S. C. Prior to entering the service, he was employed with Coca Cola Bottling Co., of Charlotte.

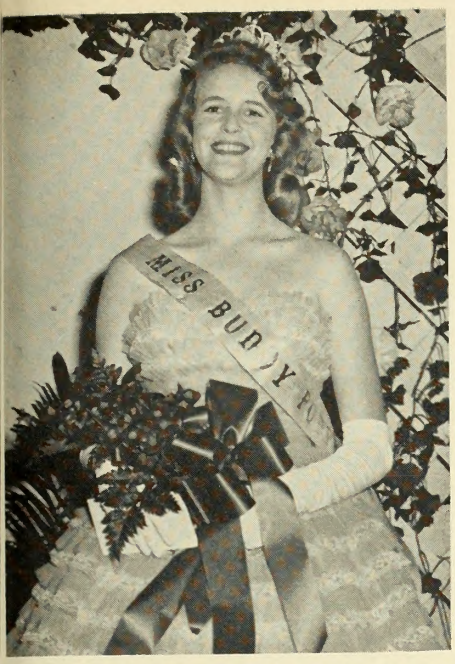
THE FOLLOWING employees are welcomed back to work: *J. O. Crotts*, truck driver in Davidson County Maintenance Department, who has been on extended leave since last October and *E. F. Swicegood*, truck driver in Davidson County Maintenance, who was out sick for over a month. We are happy to hear that Mrs. A. C. Leazer, wife of *"Speedy" Leazer*, truck driver in Rowan County Maintenance Department, is getting along fine after a very serious heart operation at Baptist Hospital in Winston-Salem.

CONGRATULATIONS to Edith Karen Lupton, only daughter of Mr. and Mrs. *George Grady Lupton* of Salisbury, and PFC Marvin F. Brown, Jr., who were married March 13 at the Base Chapel, Lewisville, Nebraska, where the groom is stationed. He is the son of the Marvin F. Browns of Rt. 5, Salisbury. The bride's father works with the Construction Department in Salisbury.

BAD WEATHER hampered the fishing when our Division Engineer, *R. B. Fitzgerald*, went on a recent trip to Santee Cooper, S. C.

BEST WISHES to our proud parents, Mr. and Mrs. *B. J. Sipes*, whose daughter was born March 29. Bill is a truck driver with Rowan County Maintenance.

SORRY to hear that *H. A. Harwood*, semi-skilled bridgeman in the Rowan County Bridge Department, suffered a crushed finger in a recent accident.



Norma Marsh was recently chosen Miss Buddy Poppy of the Robert Franklin Garland Post 9751, Veterans of Foreign Wars. She's the daughter of Mr. and Mrs. Odie Marsh of Marshville. Her father works in Union County Maintenance.

DIVISION TEN

By J. W. JONES

Division Correspondent

GETTING AN EARLY start fishing are *Ralph D. Fisher*, who landed about 50 pounds at Santee Cooper Lake, S. C., and *Wade H. Marsh*, who went fishing at Cherry Grove. *Joel E. Tucker* has already launched the water skiing season at Lake Tillery. How's the water, Joel? Vacationers have included Resident Engineer and Mrs. *W. A. Little*, who enjoyed an early Spring trip to Charleston; *"Tom" Gribble* and his wife, who went "down east"; *Thelma Wernsing* of the Charlotte District Office, and her husband visited relatives in Baltimore over the holidays; and the *John W. Jones* family, who went to Florida to be with his mother over the holiday.

CONGRATULATIONS to Highway Inspector *W. E. Woodruff*, who is the new president of the Albemarle Optimist Club. He has been quite active in local affairs and we wish him success as head of the Optimists.

SYMPATHY to *F. B. Ranson, Jr., H. L. "Buck" Link* and *George Tysinger*, who recently lost their fathers.

WE HOPE that *Floyd Penninger* of Huntersville Maintenance will be back on the job soon. He has been out since February due to high blood pressure. Best wishes for a speedy recovery to *Lee Lomax* of Union County, who has been sick for some time. *D. K. Lowder*, Stanly County Maintenance Foreman, is reported recuperating following surgery at a Charlotte Hospital. *M. A. Smith* is a patient at N. C. Sanatorium, McCain and reported on the mend. *J. B. Pridgen* is still on the sick list. *George C. Allen, P. D. Brock, R. F. Brown, L. L. Martin* and *R. G. Tice* have returned to work following illness. *James K. Jordan* and *Nathan M. Morgan* have been out of work several days due to sickness. We hope they are much better now. Dennis, son of *Howard G. Mitchell*, and Mrs. *Luther A. Morton* are also on the sick list.



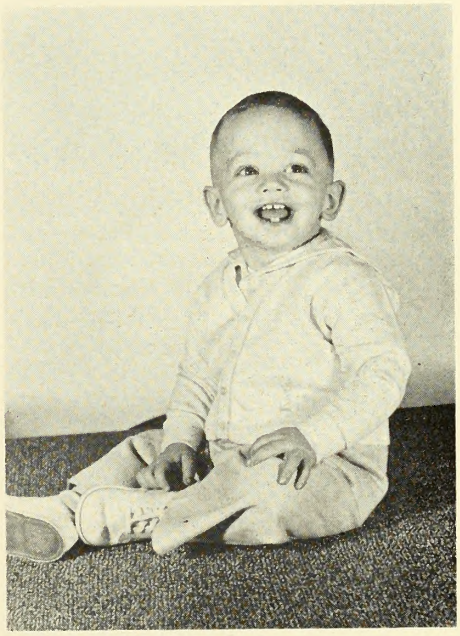
Alan Widenhouse is all dressed up to celebrate his first birthday. He's the grandson of the DeWitt Greens of Mt. Pleasant.



Christopher Lamont Shaffer is the four months old son of Mr. and Mrs. R. M. Shaffer. Daddy works in the Division 10 Right of Way Department.

CONGRATULATIONS to the *Kenneth Irvins* on the birth of their first child, a girl, who arrived in March.

EVERYONE is rooting for Machine Operator *B. B. Poplin*, who was injured when the front-end tractor loader he was operating overtured and pinned him underneath. Poplin remained trapped under the tractor for approximately 30 minutes before men with hand shovels dug a hole to free him. He is reported in satisfactory condition, but it will be many months before he can return to work.



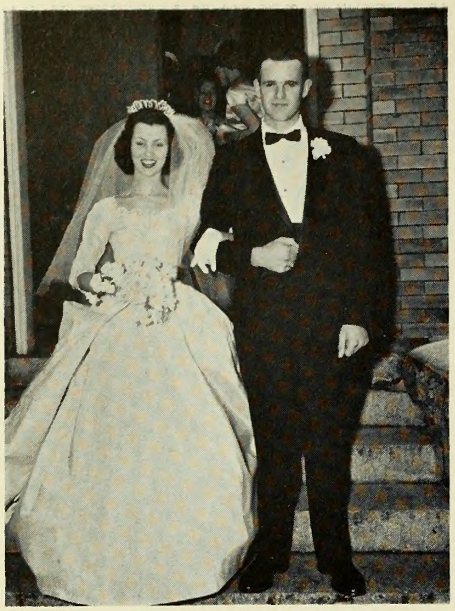
Although he weighed only four pounds at birth, and spent some time in an incubator, Randy Whittington is the picture of health at age 15 months, and now weighs 22 pounds. He is the grandson of DeWitt Wiles of the Bridge Department in Division 11. "Dee" has been working for the Highway Department for 35 years.

DIVISION TWELVE

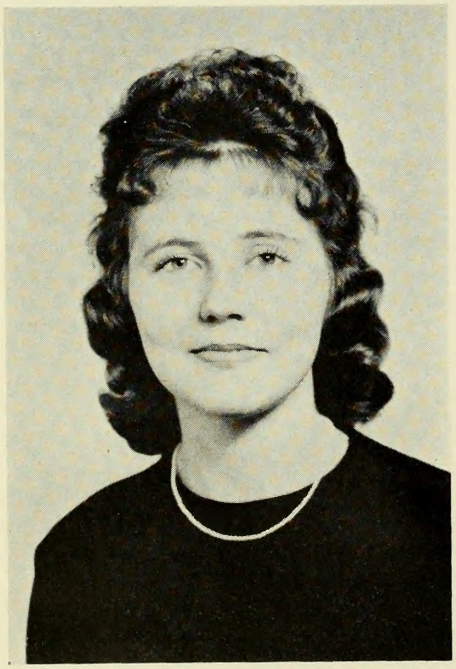
By JEAN CLINE

Division Correspondent

THE BEST LAID plans often are interrupted and again the weather played a big part in our holiday plans. Many employees were overheard making plans, concerning yard and garden work (with some fishing and relaxing too,) but heavy rains spoiled it all. Our new District Engineer, *P. J. Corpening* and his wife report an enjoyable time at their "second home", near Blacksburg, S. C. Resident Engineer and Mrs. *W. A. McNeill* spent the holidays in Americus, Ga.



Mr. and Mrs. Alexander Newton Corpening leave the Broad Street Methodist Church in Statesville following their recent wedding. The groom is the only son of District Engineer and Mrs. P. J. Corpening. He received a degree in Ceramic Engineering at Clemson College and has a position with the Ferro Corporation in Cleveland, Ohio, where the couple will live. Mrs. Corpening is the former Catherine Ann Royster of Statesville.



J. F. Lutz, Catawba County Machine Operator, has a right to be proud of his oldest daughter, Frances, shown here. A 1960 graduate of Maiden High School, she is now majoring in elementary education at Appalachian State Teachers College, Boone.

GOODBY AND GOOD LUCK to *M. L. Phillips* of the Shelby residency, who has gone on active duty with the Air Force at Selma, Ala. A welcome is extended to *M. E. Willis* and *Joe B. Rose*, who are new employees in the Construction Department at Shelby.

TRUCK DRIVERS and machine operators in District 2 have completed the training set up under the Equipment Operation and Care School. Instructors were *C. G. Poston* of Shelby and *T. C. Walker* of Iredell. *R. W. Connolly* and *D. R. Millsaps* conducted the Red Cross Refresher Course for maintenance employees in District 2.

OUR SYMPATHY goes out to the family of *Crowson A. Matlock* of Taylorsville, who died recently. He had more than 25 years of service with the Maintenance Department. We extend sympathies also to foremen *Charles* and *W. R. Tilley*, in the death of their brother.



Here are some of the men in the Statesville Construction Party. Left to right: F. T. Wagner, Resident Engineer; Harold Sprinkle, J. W. Alexander, Donald Reavis, Bob McLain, Gib Bowles and Claude Gaither.

ROLL CALL FOR THE SICK includes: *G. G. Millsaps* and Mrs. *R. A. Parker*, recovering following minor surgery; *E. R. Lineberger*, back on the job after illness; *C. A. Poovey*, rheumatism; *O. R. Rockett;* Area Foreman *J. B. Murdock*, bursitis; *W. E. Holcomb*, eye infection; *E. L. Warren's* son, Jonah, appendictitis; Robert, son of *V. B. Reavis*, who suffered a hip injury; *R. L. Harris* and *H. H. Austin*, recent hospital patients, and Mrs. *Ed Coles*, who underwent surgery.

THE HIGHWAY CONFERENCE was attended by *W. W. Wyke, R. J. Albert, K. E. Mauney, W. A. Barrett, W. A. McNeill, R. R. Nichols, F. T. Wagner, C. C. Mauney, Richard Danner, D. L. Rink* and *T. A. Winkler.*



Here are employees of the Stock Room in the Division 14 Equipment Department including J. B. Hamilton, Equipment Superintendent. They are, right from left: E. J. Pullium, Harry Owen, Don Blanton, Charles Brown, Hamilton and G. C. Collins.

CONGRATULATIONS to Resident Engineer and Mrs. *F. T. Wagner*, on the birth of a son, Frank, Jr., on April 6.

WISHES for a speedy recovery are extended to *Jack Turner* of the Sign Department, a patient at Black Mountain Hospital. It's good to hear that Sign Foreman *Fred Summers* is home from the hospital and it is hoped that he will soon return to work. *Lester L. Smith* of District 1 has returned to work after being out on sick leave for some time. A speedy recovery is wished for *Wade Harbin* of Statesville Residency, who was scheduled to undergo surgery at Iredell Memorial Hospital.

DIVISION FOURTEEN

By D. V. RAXTER

Division Correspondent

GOLF ENTHUSIAST *J. C. Beck* picked up a few pointers on the game during his recent trip to Augusta, Ga., to watch the Masters Tournament. Beck is Maintenance Supervisor for Macon and Graham Counties.

GET WELL WISHES are extended to *R. A. Gash*, Road Maintenance Supervisor in District 1, who underwent recent surgery, and to Sign Helper *Burt Buchanan*, who has been out sick.

GOOD LUCK to Highway Inspector *Eugene Reed*, who has resigned to become Postmaster at Whittier. He worked under the supervision of District Engineer *E. L. Curtis* until he was transferred to the Construction Department in 1958. Reed is married to the former Mary Ann Worley and they live at Whittier.

Highway Commission:

Re-organization Bill Provides 19 Members, Full-Time Chairman

A bill to re-organize the State Highway Commission, with a full-time chairman and increase the number of members on the Commission to 19, was passed recently by both the House and Senate. We are reprinting below, portions of the bill:

"There is hereby created a State Highway Commission, to be composed of a chairman and eighteen members appointed by the Governor from different geographic areas of the State. On July 1, 1961, and every four years thereafter, the Governor shall appoint a chairman and eighteen members to serve for four-year terms. The chairman or any member appointed pursuant to this section may be removed from office by the Governor for cause. In case of death, resignation, or removal from office of the chairman or a member prior to the expiration of his term of office, his successor shall be appointed by the Governor to fill out the unexpired term.

"The chairman shall devote his entire time and attention to the work of the commission, and shall be paid a salary fixed by the Governor subject to the approval of the Advisory Budget Commission. The chairman shall be the executive officer of the commission and shall execute all orders, rules, and regulations established by the commission.

"It is the intent and purpose of this section that the chairman and the commissioners shall represent the entire State and not represent any particular area; provided, however, that the Governor and the chairman shall, without regard to the boundaries of engineering divisions, divide the State into geographic areas, and assign one or more commissioners to each area to be responsible for relations with the public generally and with individual citizens regarding highway matters. In addition the State Highway Commission shall from time to time provide that one or more of its members or representatives shall publicly hear any person or persons desiring to bring to their attention such highway matters as such person or persons may deem wise, in each of said geographic areas of the State.

"There shall be a director of Secondary Roads who shall be appointed by the State Highway Commission, subject to the approval of the Governor, and he may be removed at any time by the State Highway Commission with the approval of the Governor. The Director of Secondary Roads shall be paid a salary fixed by the Governor, subject to the approval of the Advisory Budget Commission.

"The Director of Secondary Roads shall, in consultation with the commissioner assigned to the geographic area, prepare annual plans for each county providing for maintenance and construction of the secondary roads."

"Plans for secondary roads—The State Highway Commission shall establish state-wide standards and criteria for additions to the secondary system and for maintenance and construction of secondary roads. On the basis of these standards and criteria, the Commission shall allocate funds appropriated for secondary road additions, maintenance, and construction to each of the counties, in order that each county shall receive an equitable share of available funds. The State Highway Commission shall establish policies for the preparation of annual plans for maintenance and construction of the secondary roads in each county, which policies shall include provision for consultation in the preparation process with county commissioners and interested citizens, recommendations by county commissioners and interested citizens concerning the plan, reports to persons making recommendations on the disposition of the recommendations, final adoption of the plan, and filing of a copy of the plan with the Board of County Commissioners."

The reorganization bill also provides that the Director of Highways and the Controller shall be appointed on July 1, 1961, and every four years thereafter. The Director of Highways is to be appointed by the State Highway Commission, subject to the approval of the Governor, and the Controller is to be appointed by the State Highway Commission, subject to the approval of the Governor.

The wife was overjoyed when her husband called her an angel since he was sparing in his compliments. She asked him why he was so sweet to pay her the compliment.

"Because," he replied, "you are always in the air; you're continually harping on something and you never have a thing to wear."

"Sea Level" Ferry Now In Operation

May 1st saw the inauguration of the only State-operated toll ferry service in North Carolina, as the Highway Commission's "Sea Level" began operations between Atlantic and Ocracoke.

The big ferry, which was purchased from the Taylor Brothers of Atlantic, was refitted while it was docked recently in Wilmington for minor repairs, and was painted at the Mann's Harbor Shipyard.

Operating on a one round trip per day basis, the ferry leaves Atlantic each day at 8 A.M., and departs from the Island of Ocracoke at 2 P.M. The oneway trip requires approximately four hours.

At a recent meeting, the Highway Commission adopted rules and regulations for the ferry, as well as a toll charge schedule. Chief Engineer C. W. Lee said that toll charges will be made for all passengers and vehicles.

The fare for adult passengers over 12 years of age is $2.75, while the fare for children under 12 is $1.40 each. Automobiles, station wagons, pick-up trucks and panel trucks with driver are transported for $6.75 each.

The "Sea Level" is equipped with all modern facilities and is manned by Coast-Guard licensed operators.

New Color Maps Will Be Ready Soon

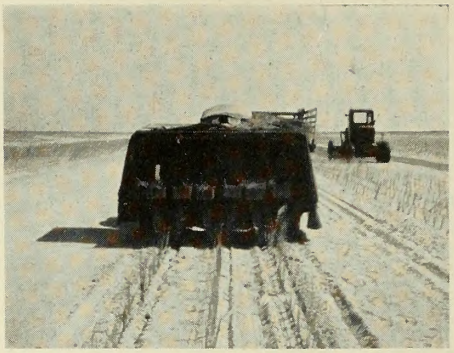
The official highway color maps for 1961 will be ready for distribution around the middle of June or the first of July.

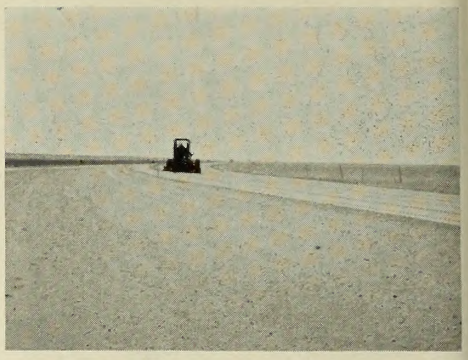
The covers of this year's map will feature mountain and coastal scenes, carrying out the theme "Variety Vacationland." On the pictorial side, there will be some 17 color scenes from throughout North Carolina, including a shot of the Planetarium at Chapel Hill, where the Mercury Astronauts received part of their training; an aerial view of the State Fairgrounds during Fair Week; a shot of a basketball game inside Reynolds Coliseum; sailing at Kerr Lake; Elizabethan Gardens; Old Salem and others. There is also a color photo-

graph and greeting from Governor Terry Sanford.

On the map side, Interstate routes will be shown in green, US routes in red and NC numbered routes in black against a white background.

This year's map is being printed by A. Hoen and Company of Baltimore.





Visitors to Ocracoke Island this summer will find three miles of new asphalt highway on which to drive, thanks to the efforts of highway crews from Division One.

The new road replaces three miles of steel landing mats between Greene Island and the ferry landing on the north end of Ocracoke. R. C. Speight, Road Oil Supervisor, and A. G. "Spot" Grizzard, Bituminous Paving Superintendent, were in charge of the project, which included, among other things, transplanting local grass to prevent wind erosion of slopes and shoulders along the new road, shown in the picture on the left. Right photo shows a motor grader at work on the project, which is expected to be completed in time for the tourist season.

Editorial Praises Interstate System

The following is a reprint of an editorial from THE HICKORY DAILY RECORD:

"We are convinced that everyone residing in the Hickory area who has had occasion to drive over completed portions of Interstate 40, east to Statesville or west to Morganton, is pleased with what is being achieved in the nationwide program to construct a 41,000-mile system of new super-highways.

"An attractive 16-page brochure has just been published by the Portland Cement Association, showing the progress that has already been made in the huge construction job, even at this early point in the contemplated fifteen-year program. Very frankly, every time we drive over the completed sections of the Interstate, either West or East of Hickory, we enjoy a sense of amazement in seeing and experiencing the transformation which has been wrought in road-building.

"With the passage by Congress of the Federal Aid Highway Act of 1956, the National System of Interstate and Defense Highways was born. It was intended to build, over a period of fifteen years, a system of super roads adequate for traffic expected by 1975.

"Already one-fourth of the Interstate System is open to traffic and the advantages are now apparent.

"These advantages make the Interstate System worth its cost.

"The greatest value of the Interstate System is not in saving money nor in saving time, however; the greatest value is in saving human lives.

"On the basis of calculations by the National Safety Council it is estimated that once completed the Interstate System will save about 4,000 lives a year.

"Accident figures are not yet available specifically for Interstate highways, but an idea of their safety can be seen from accident statistics kept by the nation's toll roads, most of which have the same safety features as Interstate highways. During the first quarter of 1960 there were five fatalities per 100 million miles of travel on all U. S. roads excluding the toll roads. The death rate on the 18 major toll roads was 1.5 deaths in the same travel distance three times better than the national average.

"The chief reason these roads are so safe, is that their design eliminates most of the 'friction' with other traffic. Interstate highways have roadways that are separated by wide strips, or medians, so that opposing traffic is separated. They are built with planned access points, or access control as it is called, permitting motorists to enter or leave only at specified locations; all other roads are carried over or under Interstate highways.

"Moving traffic on an Interstate highway does not normally meet cars that are parked, stopped or entering and leaving at right angles. The all-too-familiar lineup of cars waiting to get around one or two slow-moving vehicles is eliminated. All traffic moves in the same direction at essentially the same speed. If a driver wants to pass, there is room to do it safely.

"Other features—found on many Interstate highways—such as fencing, better and more uniform signing, lack of billboards, lighting of busy areas, all-weather shoulders and light-reflective, skid-resistant pavements-help boost the good safety record of the Interstate System."

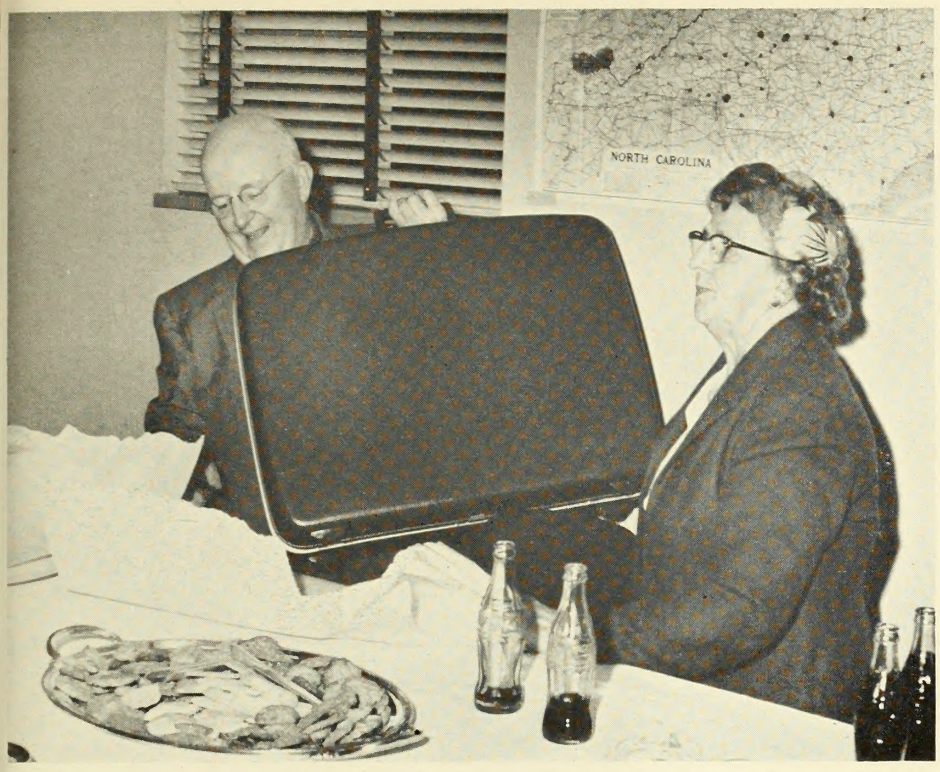
Crossover Closings Proposed At Hearing

A proposal to close some 30 crossovers in a 7-mile stretch of US 29 in the Kannapolis-Concord area was presented at a recent public hearing in Kannapolis. Although many of the 100 persons in attendance favored the proposal, a large group of men who operate businesses on the highway expressed concern about plans for controlling traffic into and out of the roadside businesses.

R. W. McGowan, Assistant Chief Engineer in charge of preconstruction, said the proposal includes two main phases: closing 30 of the 104 median crossovers between Poplar Tent Road and NC 152 on US 29, with the construction of deceleration lanes for left-turn traffic at the remaining crossovers; and channelization of traffic from the highway into roadside business establishments to eliminate angle parking just off the traffic lanes and cut down on the number of openings from the roadside into the highway.

Public Relations Officer Sam Beard, who presided at the hearing, pointed out that US 29 now carries some 22,000 vehicles daily and that there is no hope of Interstate 85 being completed through the area in time to give any early relief.

Executive Officer C. L. Teague of the Highway Patrol voiced his approval of the proposal. He said that almost one-third of all highway accidents in Cabarrus County occur on the 7-mile section of US 29 (553 on the route in the past three years out of 1,746 in all of Cabarrus County).



Willie Hobbs Retires

After 39 years' service with the State Highway Commission, most of it as a member of the Location Department, William L. "Willie" Hobbs retired March 31, 1961.

Location and Photogrammetric employees surprised Willie on his last day of work with a lovely party and handsome gift of luggage. Co-workers all joined together in the Photogrammetric Section to pay tribute to Willie and his many years of fine, loyal work with the Commission. After presentation of his fine gift, delicious cakes, candy and drinks were served to all, including special guest, Mrs. Hobbs.

Starting out on February 1, 1922 as a rodman, Willie later held the positions of levelman, instrumentman and party chief. After party chief, he transferred to the Construction Department as an inspector. In 1942 he moved back to Location in the Mapping Section where he was promoted to Cartographer, the position he held until retiring. His first job as Cartographer was making county maps and eventually led to being in charge of and making up the big black and white official State Highway Map. Many people over the years have been routed to all sections in North Carolina, no matter how remote, by Willie's kind and able assistance and, in many cases, across the entire United States, as his tremendous knowledge of mapping is far more than State-wide.

Future highway maps will be produced in the Division of Photogrammetry under a new process which will require a number of draftsmen.

Born August 2, 1895, in Clinton, North Carolina, Willie is the son of William A. and Lula Mae Hobbs.

He graduated from Clinton High School and business college in Jacksonville, Florida in 1915.

On November 2, 1928, he was married to the former Nancye Billings of Durham. They have five children and twelve grandchildren.

A member of the Baptist Church, they live at 2109 Glenwood Avenue, Raleigh.

Questioned as to his retirement plans, Willie replied he and Mrs. Hobbs plan to do a lot of traveling, and immediate plans are to visit their children in S. C., Florida and Maryland. (We don't believe he will need to pack a map in his new traveling bag).

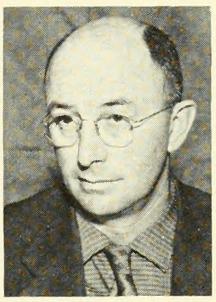
Also, he said he will partake of the now famous "Kennedy Rocking Chair," in his spare time.

Willie's parting remarks were, "It has been a great pleasure to have worked for the State Highway Commission and with my many fine associates throughout the years."

Day Named Area Maint. Engineer; Bass Is Promoted

Nathaniel S. Day has been named Area Maintenance Engineer, with headquarters in Jacksonville.

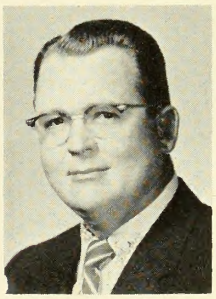
At the time of his appointment, Day was serving as District Engineer in Division Three. He is one of three Area Maintenance Engineers in the State, and is in charge of the overall maintenance of State highways in Divisions 1, 2, 3, 4 and 6, comprising some 39 counties in eastern North Carolina.



Day

A native of Jacksonville, Day has worked for the Highway Department since 1940, when he joined a location party as chainman. He was promoted to District Engineer in October 1959.

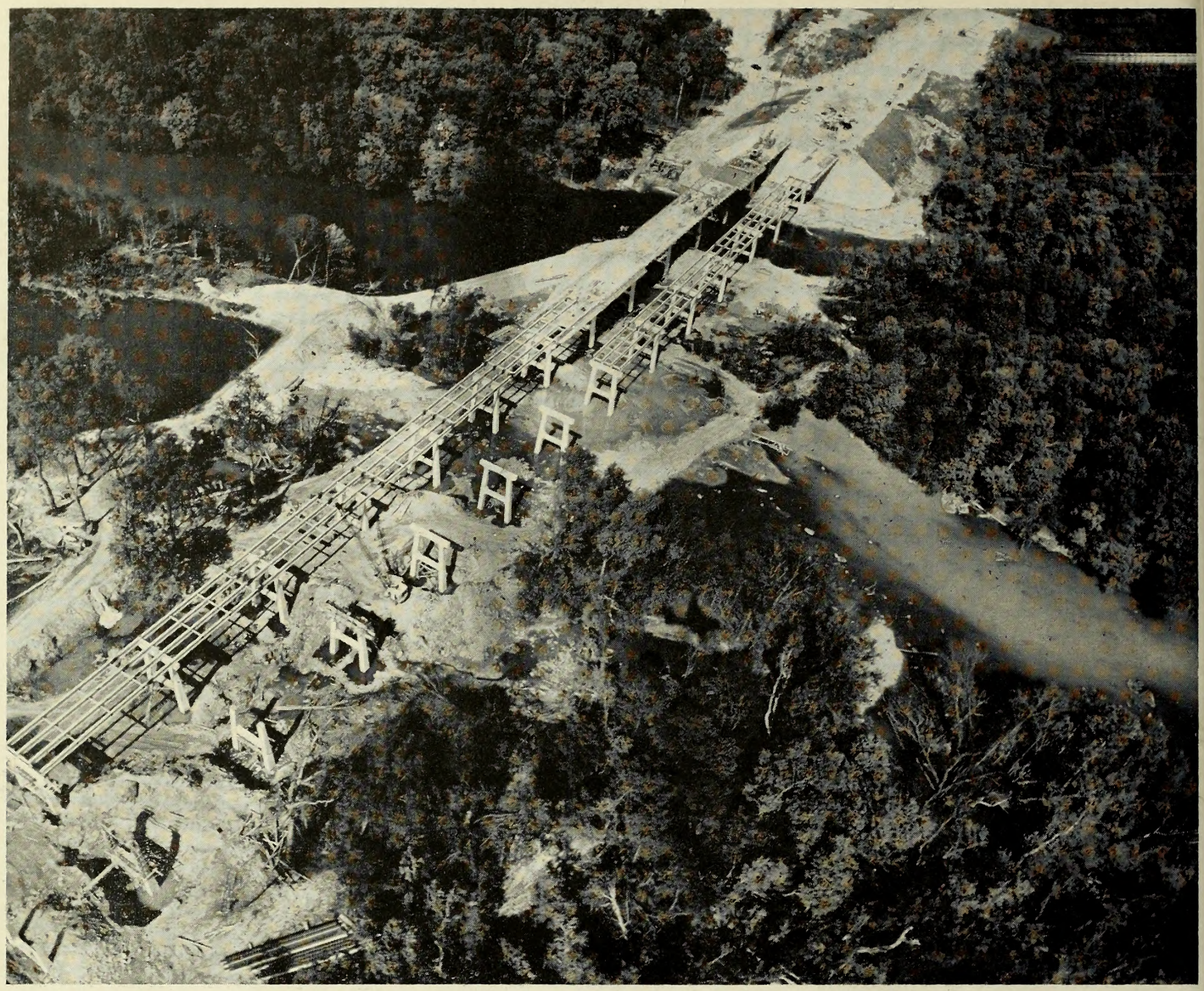
Day received his education in the Jacksonville Schools, Young Harris Academy, State College, the University of North Carolina and Brevard College. During World War II, he served two years in the Navy Seabees. He is a member of Trinity Methodist Church in Jacksonville, the N. C. Society of Engineers, the East Carolina Engineers Club, the American Legion and Veterans of Foreign Wars. Married to the former Carolyn Pittman, Day is the father of two sons, Nat Jr., and James Milton Day.



Bass

Day's successor as District Engineer is Floyd J. Bass of Turkey. Bass is a native of Sampson County. A graduate of Halls High School, he joined the Highway Department in 1947 as a rodman. He worked for a short time as a construction superintendent for A. C. Sheaver Const. Co., rejoining the Highway Department in 1950 as an Engineering Aide. He was named Road Maintenance Supervisor in 1959.

Bass is a member of Warsaw Methodist Church, where he is a member of the Board of Stewards. He also holds membership in the Clinton Lions Club and the Cape Fear Engineers Club. He is married to the former Callie Jones and they have a daughter, Mary Frances, and a son, Floyd Alan Bass.



This aerial photo was taken recently of the work underway on the Interstate Route 95 bridge between Roanoke Rapids and Weldon. Work is expected to begin soon on surfacing the bridge, which will be over a mile in length. Contractor is J. Lawson Jones of Clarksville, Va., whose bid on the structure work was $1,047,655.65. The contract for approaches to the bridge is held by Sikes Brothers of Wadesboro, whose bid was $207,376.80.

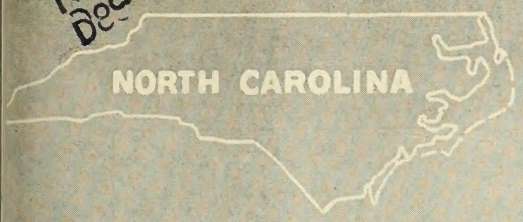
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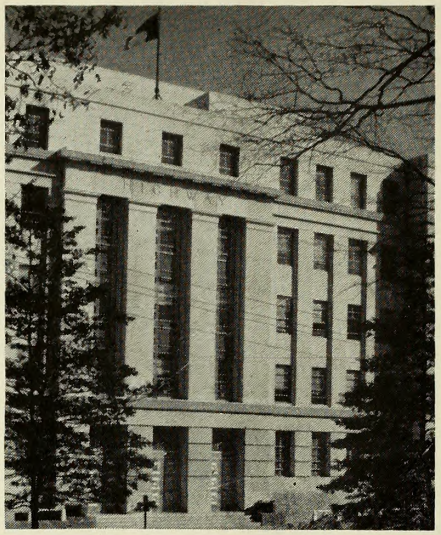
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MERRILL EVANS.....CHAIRMAN
CLIFTON BENSON.....VICE CHAIRMAN

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WATSON BRAME — GRAHAM ELLIOTT
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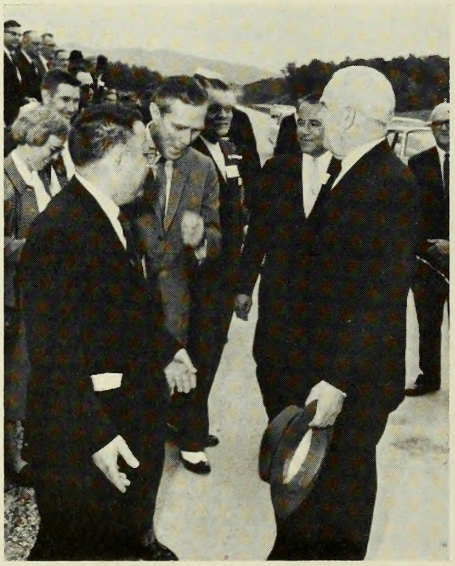
National Figures Help Celebrate Highway Week

National attention was focused on North Carolina's highway program with the dedication and opening of Interstate 40 between Hildebran and Marion. The opening was held in celebration of National Highway Week and a number of national highway figures were on hand for the event.

Featured speaker was former Governor Luther H. Hodges, now Secretary of Commerce. He said new superhighways such as the one dedicated would serve as magnets for industry and for tourists anxious to visit western North Carolina's mountain vacationland.

"Just a few miles east of here, "Hodges said," this highway will link with north-south Interstate Route 77, which will connect Charlotte and western North Carolina through the mountains with the Great Lakes and the port of Cleveland. Along the way, it will pass industrial centers such as Pittsburgh, Akron, Canton and Youngstown."

The Commerce Secretary told the group gathered for the dedication that "this will tie the great commercial center of the Carolinas—Charlotte, to the industrial heartland of America. For the first time in history, North Carolina will have direct access to Pennsylvania and Ohio industrial centers—a market of more than 60 million people within a range of 500 miles."



Highway Director W. F. Babcock chats with Federal Highway Administrator Rex Whitton, House Speaker Joe Hunt; Lt. Gov. Cloyd Philpott, and Secretary of Commerce Luther H. Hodges.

The former governor also took a poke at billboards, saying "They have a way of multiplying and when they do, they can turn a perfectly lovely stretch of road into a causeway of commercial blight."

He expressed the hope that North Carolina and other states would accept incentive payments which the federal government is offering to those states

(Continued on page 4)

The Cover

Secretary of Commerce Luther H. Hodges and Lt. Governor H. Cloyd Phipott are shown cutting the ribbon at the I-40 dedication held recently in celebration of National Highway Week. This and other I-40 dedication pictures by H. L. Powell.

19-Member State Highway Commission Sworn In

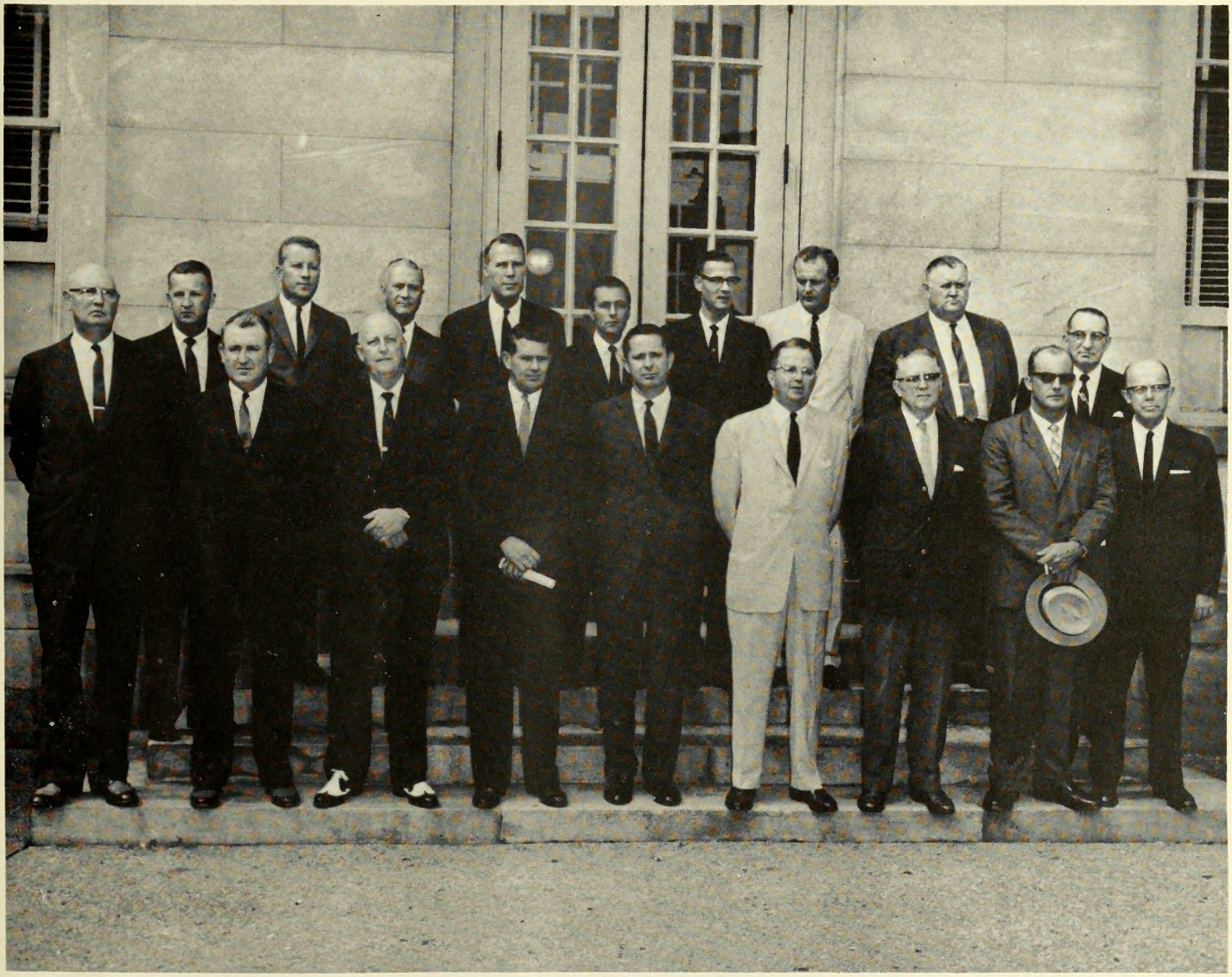
With more than 300 friends and well wishers on hand in the Hall of the House, the new and enlarged State Highway Commission took its oath of office on July 11. Immediately following the ceremonies, watched over by Governor Terry Sanford, the Commission knuckled down to the job of allocating about one-third of this year's Secondary Road funds—some $6,325,460.

Chairman Merrill Evans of Ahoskie was sworn into office by newly-appointed Superior Court Judge J. William Copeland while seventeen other Commissioners received the oath from Supreme Court Justice Emory B. Denny. One Commissioner, D. G. Bell of Carteret was unable to attend and was given the oath of office later.

Speaking prior to the ceremony, Governor Sanford told Commissioners, "this administration does not intend to stoop to pettiness in politics or any other undertaking. I know that all of you agree with this philosophy. We will be above reproach."

The Governor added, "our first purpose is to build and maintain roads. . . . roads mean commerce and trade and commerce and trade means economic growth. This is our State's material goal. Nobody in this entire Highway Commission and Department should overlook the fact that whatever he might be doing, the end purpose is to improve our road system. Every effort should be directed to that end."

The new members of the Commission are: Worth Joyner of Rocky Mount; Clifton Benson of Raleigh; Duncan M. Faircloth of Sampson County; James MacLamroc of Greensboro; Thomas McLean of Fayetteville; Ted Jordan of Robbinsville; Clint Newton of Shelby; Watson Brame of North Wilkesboro; Jack Kirksey of Morganton; Graham Elliott of Washington; Jimmy Glenn of Winston-Salem; W. E. Horner of San-



Members of the newly appointed State Highway Commission are shown on the steps of the Capitol following swearing-in ceremonies. Front row, left to right: Yates Bennett, Clifton Benson, Watson Brame, Graham Elliott, Lanch Faircloth, Jimmy Glenn, W. E. Horner, Ted Jordan and Chairman Merrill Evans. Back row: Worth Joyner, Jack Kirksey, James MacLamroc, Tom McLean, Clint Newton, Murray Tate, Gilliam Wood, Elsie Webb, Paul Younts. Commissioner D. G. Bell was absent when the picture was made.

ford; Paul Younts of Charlotte; Yates Bennett of Burnsville; Elsie Webb of Rockingham; Murray Tate of Hickory; Gilliam Wood of Edenton; and D. G. Bell of Carteret.

Enthusiastic applause greeted each of the new Commissioners as Governor Sanford personally presented Commissioner certificates to them. In some cases the Governor read the full name remarking that this was the first time some of the Commissioner's complete names had been revealed.

Following brief picture- taking on the south portico of the capitol building, the Commission assembled on the second floor of the Highway Building for a short business meeting. Chairman Evans passed out the various County assignments of Commissioners remarking that arbitrary divisional boundaries had been ignored for the most part in the assignments. Most Commissioners will be working with at least two Division Engineers in road matters.

Director of Secondary Roads Ben Roney presented to the Commission a recommended distribution among the various Counties of $6,325,460. The allocation is the first by the new roads body and represents approximately one-third of the total availability of funds for rural road construction during the current fiscal year. Distribution was made on the basis of $200 for each mile of unpaved roads in each of the Counties. Under the allocation plan Wilkes County, with 873.5 miles of unpaved roads would get $174,700 while New Hanover, with only 32.3 unpaved miles got $6,460.

Chairman Evans emphasized that the allocation was only the beginning and was not earmarked for any project in any County. Method of allocating the remaining $12,000,000 and selection of specific roads for improvement is the business of the Commission, the Chairman said.

Members of the Highway Department staff and all of the 14 Division Engineers were introduced to the Commission and Chairman Evans asked Commissioners to meet again in Raleigh for an orientation session and routine business meeting on July 20 and 21.

In order that Highway Employee readers of "Roadways" may get to know their Commissioners and their background better the following brief biographical information is presented:

Daniel G. Bell is a native of Carteret County, which he has represented in the General Assembly for the past four sessions. He served as a Town Commissioner in Morehead City from 1947 until 1955, and is a past president of the Morehead City Jaycees and the Morehead City Chamber of Commerce, and has received the Distinguished Service Award from both of these organizations. A batchelor, Commissioner Bell is proprietor of Dee Gee's Gift Shop. He is a member of Morehead City's First Methodist Church, and served in the Coast Guard during World War II. He now holds the rank of Commander in the Coast Guard Reserve.

Yates Randolph Bennett, also a batchelor, is a native of Burnsville, where he is engaged in the real estate, building and construction business. He is a partner in Yancey Development Company and Mountain Real Estate Company. Commissioner Bennett has served two terms as Register of Deeds in Yancey County, and as County Tax Supervisor. He is chairman of the Yancey County Democratic Executive Committee. A Baptist, he is former secretary of the Burnsville Mens Club and the Burnsville Lions Club.

Clifton L. Benson is in the building supply business in Raleigh. A native of Nashville, he was educated in the Nashville city schools and at State College. He is active in the work of the Methodist Church and is treasurer of the Democratic party in North Carolina. He is married to the former Nell Goodwin and they have three sons.

Cyrus Watson Brame is a native of Winston-Salem, but now makes his home in North Wilkesboro. Active in the Democratic party, he is chairman of the Wilkes County Democratic Executive Committee, and was a delegate to the National convention in Los Angeles last year. He is a Methodist and a member of the Board of Trustees of Appalachian State Teachers College. He is a jobber for Esso Standard Oil Company and also a wholesaler. Married to the former Mary Lina Forester, he is the father of two children.

Arthur Graham Elliott is a native of Warren County, but now makes his home in Washington, where he is president of Elliott Chevrolet, and a director of Beaufort County Savings and Loan Association. He was educated at Washington High School, the University of North Carolina and The Citadel, where he received a degree in civil engineering. During World War II, he served as a Lt. Colonel with the Corps of Engineers. He is a member of St. Peter Episcopal Church, where he served on the Vestry for six years, and has served as president of the Washington Chamber of Commerce and the Washington Yacht and Country Club. He is also a member of Bunyan Ruritan Club and the Executive Committee of the United Fund. Commissioner Elliott is married to the former Dorothy Baugham.

Duncan McLauchlin Faircloth is a Sampson County native, and lives in Clinton, where he operates an automobile dealership, and is engaged in farming, construction work and tobacco storage. A graduate of Roseboro High School he served in the Army during 1954-55. He is married to the former Lady Talton.

James Kirk Glenn, a native of Forsyth County makes his home in Winston-Salem, where he is a distributor for Shell petroleum products. He is president of the Winston-Salem Chamber of Commerce and a past president of the Old Town Club and the Twin City Club, both in Winston-Salem. Commissioner Glenn is a director of Wachovia Bank and Trust Company, Waterman Steamship Corp., North Carolina Motor Carriers Association, and a trustee of Salem Academy and College. He operates oil compaines in Salisbury, Statesville, Mount Airy, West End and Greenville. He attended Winston-Salem city schools, Woodberry Forest School and the University of North Carolina. Married to the former Sara Stevens, he is the father of three children.

William Edwin Horner, born in Durham County, makes his home in Sanford where he is publisher of THE SANFORD HERALD. He was educated at Durham High School, Trinity College (Duke), the University of North Carolina and Columbia University. Commissioner Horner has served five terms in the Legislature and is former chairman of the Lee County Democratic Executive Committee. He is active in the work of the Methodist Church and has served as district lay leader for the Fayetteville district. He is a former member of the Board of Trustees of the University of North Carolina and Fayetteville Teachers College, and has served as president of the Sanford Kiwanis Club. He was a member of Club 68, and went to Europe with Governor Hodges in 1959. Mrs. Horner is the former Nannie Andrews of Durham and they have two daughters and a son.

Ted Jordan of Robbinsville is a Graham County native and is president of Appalachian Contracting Company. He is also vice president of Phillips and Jordan, Inc., and secretary treasurer of Piney Mt. Properties, Inc. He is a veteran of the Korean conflict. Commissioner Jordan's wife is the former Reba Phillips of Gra-

ham County. They have two sons and a daughter.

David Worth Joyner is a distributor for Shell petroleum products in his hometown, Rocky Mount. He is a graduate of Rocky Mount High School and attended the University of North Carolina He is a past president of Benvenue Country Club, the N. C. Oil Jobbers Association, the Rocky Mount Chamber of Commerce and the Rocky Mount Rotary Club. He has served as a member of the Foundation Board and the Executive Committee of Rocky Mount Wesleyan College. He has also served as chairman of the highway committee for the National Oil Jobbers Council. He and Mrs. Joyner, the former Frances Hackney, have two children.

Jackson Bristol Kirksey of Morganton is in the lumber business. He is a former chairman of the Burke County Democratic Executive Committee, former State YDC president and a member of the State Democratic Executive Committee. He has served as a member of the State Board of Public Welfare and was first president of the Morganton Jaycees. Kirksey is a member of the Elk's Club and a former member of the Morganton Rotary Club. His wife is the former Lena Buff and they have one son.

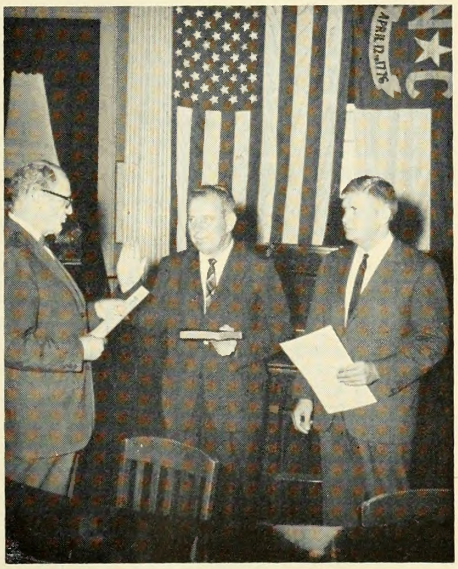
James Gwaltney Westwarren MacLamroc is a native of Greensboro. He is a lawyer, financier and real estate developer. He was educated in the Greensboro schools, at Oak Ridge Military Institute, Virginia Military Institute, the University of North Carolina and Yale University. He is a former chairman of the Greater Greensboro Planning and Zoning Commission and served on the Greater Greensboro Arterial Roads Commission. Commissioner MacLamroc is a member of the Board of Directors of the Greensboro Chamber of Commerce and the Greensboro Bar Association. He is married to the former Maxine Pugh and they have two sons.

Thomas Rodwell McLean is a partner in the real estate and insurance firm of Thompson-McLean, in his hometown, Fayetteville. A veteran of World War II, he is a member of the Fayetteville Civil Service Commission. He received his education at Red Springs High School and Davidson College, and is a member of Holy Trinity Episcopal Church in Fayetteville. Mrs. McLean is the former Elizabeth Ellison.

John Clinton Newton, Jr., of Shelby, is sales manager and treasurer of Cleveland Mills Co., of Lawndale. He received his education at Shelby High School, McCallie Prep School and the University of North Carolina. A veteran of World War II, Commissioner Newton is a Baptist and a Rotarian. He is married to the former Ansley Schenck and they have three children.

E. Murray Tate, Jr., a Hickory attorney, is the son of a retired highway employee. A native of McDowell County, Commissioner Tate has served as solicitor of Hickory Municipal Court and Judge of the Hickory Municipal and Juvenile Court. He served as Catawba County manager for Governor Sanford during the gubernatorial campaign. He is a former president of the Catawba County Young Democrat Club and was named the outstanding local club president in the State. A former president of the Hickory Jaycees, he was Hickory's Outstanding Young Man of the Year for 1960. He was educated at Pleasant Gardens High School, the University of South Carolina and Wake Forest College, where he received the LLB degree in 1949. A veteran of World War II, he has been active in the work of the First Baptist Church in Hickory, where he is a deacon and a Sunday School teacher. Mrs. Tate is the former Helen Moore and they have three children.

Another attorney on the Highway Commission is James Elsie Webb of Ellerbe, who practices law in Rockingham. A Richmond County native, he formerly served as attorney for that county. He attended Ellerbe High School, Oak Ridge Military Institute and Wake Forest College, where he received the LLB degree in 1933. He is a member of the Richmond County Democratic Executive Committee, the Elks Club, the Richmond County Country Club and is past president of the Ellerbe Lions Club. In addition to his law practice, he is also engaged in farming and mercantile business. Mrs. Webb is the former Robbie Lea Ellerbe.



Governor Terry Sanford looks on as Highway Commissioner D. G. Bell, center, of Morehead City is sworn in by Secretary of State Thad Eure, left.

John Gilliam Wood of Edenton is a fertilizer manufacturer, farmer and banker. A New Jersey native, he was educated at Virginia Episcopal School and the University of North Carolina. He is a former county commissioner, past president of the Rotary Club, and served overseas during World War II. He is a senior warden in St. Paul's Episcopal Church, Edenton. He is married to the former Nancy Trask and they have one daughter.

Paul Reid Younts of Charlotte is president of Younts Realty and Insurance Corp. He was educated in the Charlotte Public Schools and at Charlotte University. He is a retired Brig. General, having served in both World Wars, and is a past president and member of the Board of Directors of the Charlotte Chamber of Commerce. Commissioner Younts is also a former vice-commander and department commander of the American Legion, and former Charlotte postmaster. Mrs. Younts is the former Elizabeth Talbert.

The following is a list of the new Highway Commissioners and the various counties to which they have been assigned:

Gilliam Wood—Currituck, Camden, Pasquotank, Perquimans, Chowan, Gates, Hertford, Northampton, Bertie and Dare.

Graham Elliott — Martin, Pitt, Beaufort, Washington, Tyrrell and Hyde.

D. G. Bell—Carteret, Onslow, Jones, Lenoir, Greene, Craven and Pamlico.

Lauch Faircloth—Sampson, Duplin, Pender, New Hanover and Brunswick.

Worth Joyner — Halifax, Nash, Edgecombe, Wilson, Wayne and Johnston.

Clifton Benson—Person, Granville, Vance, Warren, Franklin, Durham and Wake.

Tom McLean—Cumberland, Bladen, Robeson and Columbus.

James G. W. MacLamroc—Rockingham, Caswell, Guilford, Alamance and Orange.

(Continued on inside back cover)

I-40 DEDICATION

(Continued fron inside front cover)

which comply with federal suggestions regarding billboard control. (The incentive payment is one half of one per cent of the construction cost of the highway).

Another speaker at the dedication was Federal Highway Administrator Rex Whitton, who called the new stretch of I-40 an "example of what is to come" when the entire 41,000 miles of Interstate highway are completed by 1972. Significant in the selection of I-40 for the national observance, he said, is the North Carolina Highway Commission's excellent reputation, which "has been heard all over the nation."

Lt. Governor H. Cloyd Philpott, representing Governor Terry Sanford who could not attend because of a previous out-of-State engagement, told the gathering that the superhighway symbolizes a North Carolina which has resolved to move ahead rapidly in industry, in agriculture, in highway transportation, and in all other phases of economic and social life.

Philpott said "we are happy that North Carolina has been among the nation's leaders in the construction progress of the giant Interstate Highway System." He said that North Carolina also believes that the tremendous benefits to be derived from the Interstate Highway System should be extended to US and NC numbered routes."

In a speech delivered by his son, U. S. Senator Sam Ervin, Jr. of Morganton said that the new section of highway "will prove of great benefit to our city." He pointed out that studies in various parts of the country demonstrate that removal of through traffic from the business district is an aid rather than a hindrance to local business. He emphasized that bypassed communities, freed of through town congestion, tend to be stimulated by the presence of new expressways.

Participating in the ribbon-cutting ceremony, with four pairs of gold scissors were Hodges, Whitton, Philpott and 12th District Congressman Roy A. Taylor. The red, white and blue ribbons were fastened to muzzles of 155mm howitzers at opposite ends of the speaker's platform and were lowered in front of the dignitaries for the ribbon cutting.

Hodges, who was scheduled to arrive at the scene by Army helicopter, was delayed due to bad weather and arrived some 40 minutes late, in a 1915 model T Ford.

A large crowd witnessed the dedication ceremony and ribbon-cutting at the intersection of I-40 and US 64. Passing the time awaiting the arrival of Hodges, the Drexel High School Band presented a musical program.



Commerce Secretary Luther Hodges steps from a 1915 model T Ford and is greeted at the dedication site by Morganton Mayor H. L. Riddle and an unidentified photographer.

Cavalcades came to the dedication from many of the cities and towns along the eventual I-40 route. Among those present were mayors, city councils, county commissioners and representatives of chambers of commerce from many of these cities and towns. A caravan of 25 cars carried between 80 and 100 persons from Winston-Salem to the dedication site. They included Mayor John Surratt, Forsyth County Commission chairman Fred Hauser, T. J. Van Metre and former Mayor Marshall Kurfees.

The invocation was given by the Rev. John D. Smith, pastor of Morganton's First Presbyterian Church; there were greetings by J. D. Fitz, publisher of the MORGANTON NEWS-HERALD; Dr. James Collett, president of the Morganton Chamber of Commerce, and the introduction of special guests by Highway Director W. F. Babcock.

Also scheduled to take part in the ceremonies were Senators B. Everett Jordan and Sam Ervin, Jr., who sent their last minute regrets at being unable to attend, because of heated Senate debate on the Federal Aid to Education bill.

Following the dedication and ribbon-cutting, the Morganton Chamber of Commerce was host at a luncheon in the Community Center for some 200 dignitaries.

Facts On Legislative Increase

The new, legislative salary increase for permanent, fulltime employees went into effect on July 1 and is reflected in employee pay checks slated for delivery on July 28. Although various newspaper accounts have referred to the General Assembly action as providing a 5% pay hike for State employees, this is only the average. Actually, the annual increase for employees below the maximum in their salary range is equal to the employee's next regular increment. For employees at or above the maximum of their salary range, the Legislature made special provisions to provide for an increase.

To assist employees in figuring the annual value of their legislative increase, ROADWAYS is happy to print the chart below.

Employees who have not yet reached the maximum salary of their classification may simply find their present salary in the chart. The annual amount of the legislative increase is shown in the next column.

YOUR SALARY BETWEEN*	LEG. INCREASE	YOUR SALARY BETWEEN*	LEG. INCREASE
$1,836-2,123	$ 96	$ 7,176- 7,535	$360
2,124-2,339	108	7,536- 7,919	384
2,340-2,579	120	7,920, 8,315	396
2,580-2,843	132	8,316- 8,723	408
2,844-3,131	144	8,724- 9,167	444
3,132-3,287	156	9,168- 9,623	456
3,288-3,623	168	9,624-10,103	480
3,624-3,803	180	10,104-10,607	504
3,804-3,995	192	10,608-11,135	528
3,996-4,403	204	11,136-11,699	564
4,404-4,859	228	11,700-12,275	576
4,860-5,099	240	12,276-12,899	624
5,100-5,627	264	12,900-13,535	636
5,628-5,903	276	13,536-14,219	684
5,904-6,203	300	14,220-14,927	708
6,204-6,515	312	14,928-15,671	744
6,516-6,839	324	15,672-	780
6,840-7,175	336		

*Employees who now receive more than the maximum for their classification should read the special provisions made by the General Assembly for handling their increase. See paragraph in bold type below.

Those employees who now earn more than the maximum salary for their classification should refer to the chart using the maximum salary figure for their classification and NOT their present salary.

For example: A CLERK II's salary range is $2988-3804. Even though she may now make $4000, she should use the figure $3804 in referring to the chart. In this case, her legislative increase would be $192 (NOT $204, which would be indicated if she used her actual "over maximum" salary of $4,000).

Personnel Officer Sam Badgett emphasized that the legislative salary increase will have no effect on any future automatic or merit salary increments which may fall due, and in no way changes the anniversary dates for employees. In other words, an employee who would be eligible for an automatic or merit increment after July 1 of this year would receive such increment in addition to the legislative increase, in accordance with the standard procedures for granting automatic and merit increments.

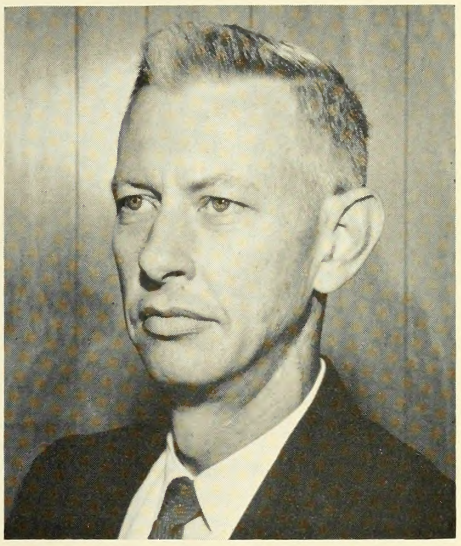
Badgett also pointed out that minimum and maximum salaries for each classification have been revised to reflect the legislative increase.

Three categories of employees are not eligible for the legislative increase as approved by the General Assembly. The increase does not apply to:

(1) employees in positions exempt from the State Personnel Act.

(2) employees having temporary or part-time appointments.

(3) employees separated from State service due to resignation, dismissal, reduction in force, death, retirement or leave without pay, whose last workday was prior to July 1, 1961.



James D. Lacy

Bureau of Public Roads Chief For North Carolina

James D. Lacy has taken over the duties of Division Engineer for the North Carolina Division of the U. S. Bureau of Public Roads. Lacy succeeds Lowell S. Coy, who has been transferred to Texas as Division Engineer for that State.

A native of Texas, Lacy was educated in the Terrell, Texas schools, and received a BS degree in civil engineering from Texas A&M. During World War II, he served as a First Lieutenant with the Army Corps of Engineers and following his discharge in 1946, went to work for the Bureau in Texas. Prior to coming to North Carolina as Division Engineer, he worked in the Bureau's Washington offices as chief of the Plans Analysis Branch.

The Bureau of Public Roads recently moved its offices from the Highway Building to the Phillips 66 Building in Raleigh's Cameron Village, where Lacy's office is located.

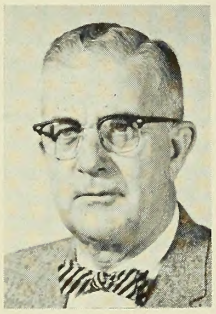
Lacy is married to the former Ruth LaCroix of Bennington, Vermont, and they have seven children.

Engineering Promotions, Retirements

Highway Director W. F. Babcock has announced several promotions among engineering personnel.

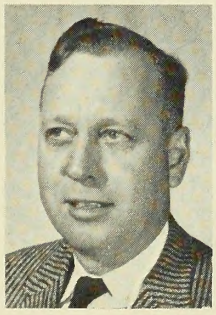
FIFTH DIVISION

Merle T. Adkins is the new Division Engineer in the Fifth Division suceeding J. W. Jenkins, who retired. A native of New York, Adkins was educated in the Durham schools, at Carolina Military Academy and the University of North Carolina. He has worked continuously for the Highway Department since 1925, serving as rodman, instrumentman, transitman, draftsman, party chief, claim adjuster, right of way engineer and district engineer and was named Assistant Division Engineer in the Fifth Division in 1957. He is a member of the Durham Engineers Club and the N. C. Society of Engineers. Adkins is married to the former Louise Mason and they have two children.



Adkins

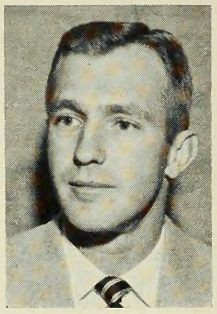
Succeeding Adkins is Carl C. Painter of Reidsville, who has been serving as District Engineer in the Seventh Division at Graham. A native of Caswell County, Painter graduated from State College with a degree in civil engineering. He served as an officer in the Navy during World War II, joining the Highway Department following his discharge. He is married to the former Cora Lee Wagoner and they have two children.



Painter

J. W. Jenkins retired after 41 years service with the Highway Department. A native of Gold Hill, he was a pilot in the Air Corps during World War I. He served as instrumentman, resident engineer, assistant district engineer, district engineer and assistant division engineer before being named head of the Fifth Division in 1957. Jenkins is married to the former Sarah Elizabeth Lazenby.

Succeeding Painter as District Engineer in the Seventh Division is Earl F. Hoover of Spruce Pine. A Lenoir native, Hoover has worked for the Highway Department since 1949. He graduated from State College with a degree in civil engineering and prior to his promotion, was serving as Resident Engineer on construction projects in the Thirteenth Division. He and his wife, the former Betty Beddingfield, have one child.



Hoover

TWELFTH DIVISION

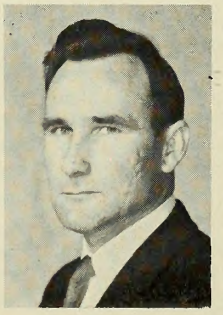
In the Twelfth Division, W. W. Wyke is the new Division Engineer, succeeding E. L. Kemper, who retired, and Kenneth E. Mauney is the new Assistant Division Engineer.



Wyke

A Catawba County native, Wyke served as Assistant Division Engineer from 1957 until his promotion. A graduate of Catawba High School and Draughton Business College, he joined the Highway Department in 1932 as a junior inspector. He is a member of the Shelby Kiwanis Club and Aldersgate Methodist Church in Shelby. Mrs. Wyke is the former Martha Fulton and they have three children.

Mauney was educated in the Ft. Lauderdale, Fla., schools, and at State College, where he graduated in 1950. A veteran of World War II, he holds a commission in the Army Reserve. He is a member of the Baptist Church and the Shelby Junior Chamber of Commerce. He is married to the former Nola L. Cody and they have two children.

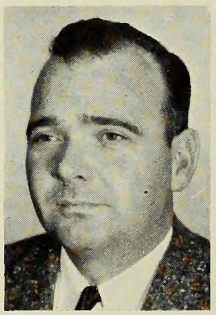


Mauney

Kemper retired after 40 years with the Highway Department, during which he served as instrumentman, resident engineer, office engineer and assistant division engineer before being named Twelfth Division Engineer in 1954. A veteran of World War I, he is a member of the Shelby Chamber of Commerce and is a past president of the Shelby Kiwanis Club. He is also active in the work of the Episcopal Church. He and Mrs. Kemper, the former Martha Barrett, live at 713 E. Warren Street, Shelby. They have three children.

Dennis W. Patrick has been named Ferry Operations Manager and Clinton L. Haislip of Washington has moved into Patrick's post as District Engineer in the Second Division.

In the new position, Patrick, a Hertford native, will be in charge of the State's four ferry services, including the new toll ferry now in operation between Atlantic and Ocracoke. In making the announcement, Babcock said the State's ferry operations, previously supervised from the Division Engineer level, have become important enough to make it necessary for all the ferry operations to be handled by one person, from a central location.



Patrick

In naming Patrick to manage the State's ferry operations, Director Babcock praised the work of Division Engineer W. N. Spruill of Ahoskie, who for the past several years has directed the ferry operations in addition to handling routine division highway matters, and was helpful in setting up the Atlantic-Ocracoke ferry on a toll basis.

Patrick had served as District Engineer in the Second Division since 1959. He received his education in the Aulander schools and at VPI, where he studied civil engineering. During World War II, he served as an officer in the Seabees, joining the Highway Department following his discharge. He is married to the former Catherine Morris and they have three children. Patrick is

(Continued on inside back cover)

N. C. S. H. P. E. A. Association News

VOLUME 10—EDITION 7 JULY-AUGUST

ROWAN COUNTY is the first county in the State to report 100 per cent membership for the new year, this reported on May 8 for 113 members in every department in the county — a fine record which we hope will be followed by many others. As of this writing, others reporting 100 per cent membership are Cabarrus County Maintenance and Equipment, Stokes County in all departments, Pitt and Transylvania prison camps, Davie County Equipment and Maintenance, Forsyth County Bridge, Equipment and Right of Way. KEEP IT UP.

THE RECENTLY APPROVED change in our insurance program created quite a bit of discussion over the State. This action was taken very reluctantly but was done by necessity, in that the entire program appeared to be in financial jeopardy unless some drastic action was taken immediately. We have attempted always to explain to our people that our insurance was purely group insurance and there was no guarantee on any paid-up values. We had always believed we could continue the retired portion as in the past, but this finally reached the point where the carrier could no longer take the losses involved; we found the trend in industry was reducing amounts of retired insurance with higher premiums; companies with whom we negotiated last year who had shown a desire to obtain the contract all wanted the reduced amount of retired insurance and higher premiums in order to have the plan on a sound financial basis. It is purely a matter of arithmetic, so many dollars paid in premiums, so many dollars returned in claims:

To the % ratio shown above is to be added 2.5% State Premium Tax for North Carolina, paid by the insurance carrier. The totals thus would show 96.3% for 1959—99.2% for 1960—102.3% for 5/61. Net operating expenses for the carrier would then be 3.7% for 1959; 0.8% for 1960 and minus 2.3% for 5/61. The carrier guarantees us a return in claims, waivers or reserves of 92.5% of premium dollars paid. Out of the Company retention of 7.5% is to be paid the 2.5% tax, leaving a net to them of 5%, and you can see they have not been receiving this.

CLAIM RESERVES in 1958 were $115,000, down to $81,000 in 1959, down to $20,000 in 1960 and now standing at a minus $58,000 in May 1961. We have been informed in the past that a minimum of $180,000 should be the claim reserves, this to guard against fluctuations, epidemics, etc. In event of cancellation of the contract, this reserve would be returned to the insured after run-out claims had been handled.

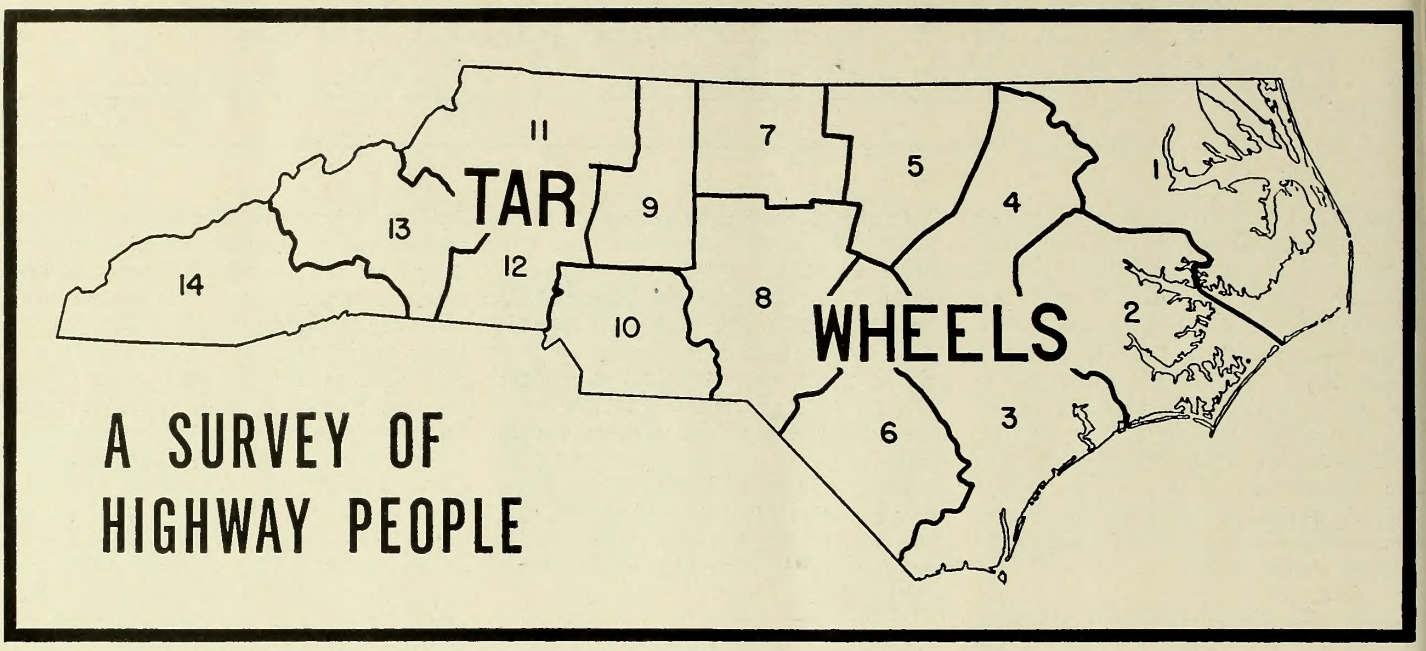
ALL AGREE the action taken was regrettable, and should agree that it was necessary to provide some margin of safety for the overall program. It would seem to be only reasonable that no carrier will continue to pay us more than they receive. To increase the life premium on all, including actives, to the point that the retired program could continue as it was would mean a premium increase to the point the younger people would not continue in the group since they would be able to purchase regular insurance at a lesser premium.

ITEM	YEAR 10/58—9/59	YEAR 10/59—9/60	PERIOD 10/60—5/1/61
PERCENTAGE RETURNS TOTAL PACKAGE			
Life	103.8	108.4	118.4
AD&D (accidental death, etc.)	40.3	44.7	118.3
A&S (weekly benefits)	97.0	107.9	103.2
Hospital	95.5	89.9	85.3
Total Package, all coverage	93.8	96.7	99.8
Retired Group Alone		558.1	537.3

PERIOD TOTAL PACKAGE	TOTAL PREMIUMS	TOTAL CLAIMS	% RETURN
10/1/58—9/30/59	$1,051,092.63	$ 986,402.17	93.8
10/1/59—9/30/60	1,333,728.49	1,290,071.16	96.7
10/1/60—5/1/61 (7 Mon.)	793,190.68	791,768.95	99.8

Let us all hope that the entire program will improve to the point that in the near future we can look for a downward adjustment in premiums—it is not impossible. Your insurance committee has put in many hours, and days of hard work on this problem for the past years. They did not reach the final decision over night, and are really to be congratulated for the work done in your behalf. They are still faced with the problem of other revisions in the casualty group unless experience rapidly improves. Regardless of our dislike for the revisions made, we should remember that the committee worked for you to the very best of their abilities, and on their own time, faced with a problem that had to be solved regardless of our own desires.

LEGISLATURE granted a 1-step salary increase, 2% extra over the 3% originally recommended, proving again the value of your Association—you do not get extra benefits without first asking and then diligently working for them. An employee at only $200 monthly will receive an extra $4, paying his dues the first month, the other 11 months being "profit"—facts, not fiction. Other benefits gained by our program: 1) salary increase applicable to all full-time permanent employees, and the ranges moved up the 1 step, this by our amendment to the Act; 2) increase in daily subsistence allowance from $9 to $10 in-State-; 3) increase Personnel Council to 7 members with 1 additional from State employees; 4) enabling act for a lengevity pay plan; 5) selection of retirement option at age 60 even if remain on the payroll; 6) stock investments of limited amount of retirement funds; 7) transfer of service and funds from Law Enforcement Fund to the State System if transfer from enforcement agency (and a member of the Fund) to a non-enforcement State Agency; 8) move up from 7/1/50 to 10/1/52 date member of Retirement system can return to State Agency and receive credit for military duty; 9) HB 934 to provide attorney for employees involved in civil suits arising out of their employment passed; 10) funds for reduction of the work week of prison guards appropriated for the first time. Does all this not prove that your $4 dues is money well spent? Could you have done this as an individual? You know the answer, so express your appreciation by membership.—Otis Banks, Secretary.



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

PHOTOGRAMMETRY—Returning with the warm weather and sunshine to the drafting unit of Photogrammetry are *Bobby Wood* and *Gwen Hester*. Bobby has completed his tour of duty with the Armed Forces—Gwen is working as a temporary employee during the summer and will resume her studies at Meredith in the fall, where she is an art major. New faces in the section are *James Hodges* and *Jimmy Wallace*. Jimmy comes to us from the Army, where he was a photographer for the M. P. Command. Hodges is from Greenville, N. C., and transferred from the Property Survey Section of the Location Dept. Proud father, *Jim McCloskey* reports that his new son, Daniel Brian, born April 28, is doing fine. *John Isley* brags that his son, Mitchell, is cutting his sixth tooth and is beginning to stand alone. The *Richard Pawlikowskis* hope to be in the new home they are building sometime soon. *Chester Gray* made a quick trip to Atlanta, Ga., where he attended a drafting symposium sponsored by Eastman Kodak. Taking two weeks military leave recently were *Carl Dempsey*, *Bobby Wood* and *Leighton Elliott* at Fort Bragg, and *Dick Pawlikowski* at Seymour Johnson. *Joe Creech* went to OCS at Fort Bragg. *Bill Parker* and *Jack Matthews*, with their families, spent a few days at the Outer Banks over the Fourth of July. *Billy Isom* and his family recently vacationed at his home in Tennessee. *Harold Powell* his wife and little daughter spent sometime vacationing at Atlantic Beach and in the Mountains. *Wayne Robey*, Aerial Photographer, is getting his feet wet these days in his new 16-foot runabout, the Mickey R.



Miss Margaret Frances Daino became the bride of Edward Frank Eason July 2 in the Trinity Methodist Church in Raleigh.

She is the daughter of Mr. and Mrs. Frank E. Daino of Raleigh and the groom is the son of Mrs. Edward Frank Eason and the late Mr. Eason of Elm City.

Frances is a June graduate of Peace College and Frank is a student at N. C. State.

The couple is living at 1210 Courtland Drive in Raleigh.

MAINTENANCE — *Ethel* and Fred *Jones* enjoyed a grand 10-day vacation in New York City the latter part of May. Special events were: seeing the Yankees play a double-header ball game with the Baltimore Orioles; attending three plays- "My Fair Lady," "The Sound of Music," and "Camelot," a tour of the Jamaica Estates to see the azaleas and other beautiful flowers; and a boat trip around the islands.

EQUIPMENT—Good luck to *Lydia Kornegay*, secretary to Mr. Upton, who resigned May 5 to keep house. *Mrs. Helen Barham* is Lydia's replacement. Welcome to the following temporary employees: *Peggy Ferguson*, *Judith Buchanan*, *Betty Garvey* and *Betsy Rogers*. *Johnny Lambeth* is sporting a new 1961 Chevrolet station wagon and just recently took his family to the beach for several days vacation.

CONSTRUCTION—*Jean Pearce*, *Mary Murphy* and *Barbara Williams* were weekend visitors at a nearby beach the latter part of May. The *H. D. Irvings* vacationed at Myrtle Beach the second week in June. *Barbara Williams* took a week off during June to vacation with her family. Welcome to *Sally Rayle*, Mr. Irving's new secretary. Sally replaces *Viola Paul*, who resigned April 1.

LANDSCAPE—*Jane Critcher* and her husband spent a weekend in June visiting friends in Wilmington.

BRIDGE—Welcome to new summer employees *Tom Wilson* and *Joe Nassif*. *Bill Campbell*, *John Billy Wiles* and *Keith Harrod* are new trainees. The summer

trips are in full swing: The *Gerald Whites* drove to Atlanta recently to visit relatives and friends; *Pete Spivey* and his wife toured Florida on a general sightseeing trip; *Colleen Garrison* sported the first real sun burn of the summer, acquired at Windy Hill, S. C. on a recent weekend; *Gerald Page* and family motored to Chase City, Virginia to visit relatives; *Reuben Shaw, George Parkin, Arnold Moore* and *Ransome Bennett* drove to Cambridge, Maryland to charter a boat for a week's cruise around Chesapeake Bay. All must be able seamen, since to date we have had no reports of seasickness. *Ben Terrell* attended his Naval Academy class reunion May 19 in Annapolis, Maryland and his Neeham Broughton High School Class reunion in Raleigh, June 17. Good luck to *Don Irving*, who left the department to teach drafting in a vocational school in Charlotte. *Ralph Self* resigned to take graduate work at State College and teach part-time. *Bill Adams* transferred to construction with the Greensboro office and, incidentally, became a bridegroom Saturday, June 10, when he married Ann Bird of Lexington. *Charlie Hicks* holds the spotlight in the Raleigh office as the only newly-wed. He and Shirley Bradshaw of Raleigh were married May 27. *Jim Wilder's* son, Jim, Jr., was made an honorary page during a meeting of the Legislature. Congratulations to the *Hugh B. McFarlings* upon the birth of a little daughter, Lisa Annette, May 16.

TRAFFIC ENGINEERING—*Art Daniel* and his family vacationed with friends from Marietta, Ohio at Emerald Isle the 3rd week in June. Sarasota, Florida was the destination of the *Harold Rhudys* for a week in June, to visit his family. The *Richard Torbiks* are very proud of their first child, Richard, Jr., who was born June 4. *Charlie Sessoms* has returned from the Yale Bureau of Highway Traffic, where he has completed a year's graduate study in Traffic Engineering. The *Pete Deavers* chose Atlantic Beach as a nice resting spot for a weekend in June.

BRIDGE MAINTENANCE—Get well wishes are extended to *J. R. Markham*, who recently was hospitalized for an operation and is now recuperating at home. The *J. J. Powells* took a vacation trip to Kentucky where they enjoyed visiting with relatives and friends of Mrs. Powell. *Marjorie Massengill* spent a recent week vacationing at the beach and at home. The *B. S. Jenkins* are enjoying spending many of their weekends in their summer cottage near New Bern. Our sympathy goes out to *L. M. Mitchell*, Bridge Superintendent in Clinton, whose father died recently.

MATERIALS & TESTS — It's nice to have *Mrs. Rita Farmer*, Chemist, and *Mrs. Marie King*, Steno, back at work from maternity leave. Welcome to *James Gower*, Tech. I, in the Concrete Lab., and to *Billy Brantley* and *Danny Blalock*, new technicians in the Soils Lab.



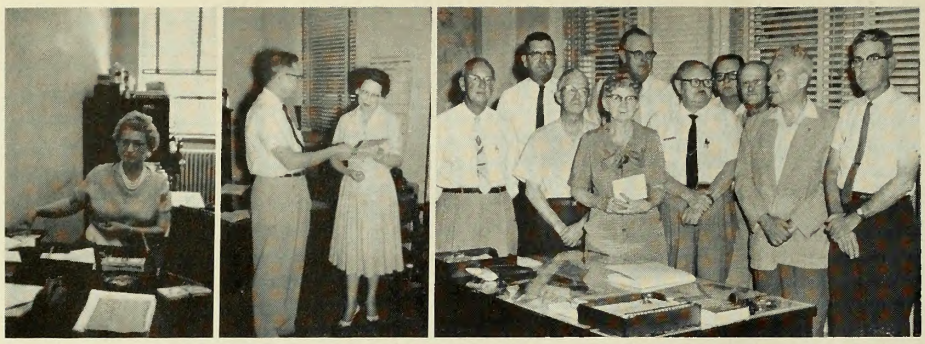
Employees in the Right of Way Department took time out recently to be photographed as a group. Kneeling, left to right: Collis Lewis, Harold Davis, Harold Cameron, Hal English, Fred Adcock, Warner Powell, Bill Tomlinson and Charles Bass. Seated: Eleanor Brantley, Qnita Clifton, Peggy Vollmar, Celia Truelove, Right of Way Engineer W. H. Webb, Jr., Maxine White, Barbara Amick, Elizabeth Talton, Eleanor Taylor and Rose Ann Harris. Standing: A. Z. Williams, Cliff Carroll, George West, C. M. Hartsock, Jr., Brantley Murray, Phil Carroll, John Fields, John Holmes, Jr., Billie Hardison, Bobby Heath, Trulah Page, Bob McCoy, J. G. Gibbs, Jack Batchelor, John Honbarrier, Martha Bailey, Tony Huntley, Sally Bunn and Ronald Thompson.

FEDERAL CONTACT—*Reba Babb* is a new addition to the staff for the summer. *S. A. Yeargan* and his family vacationed with friends at Wrightsville Beach the last week in June.

LEGAL—*Alda Doby* took two weeks vacation the last of June to be with her husband, who is home on military leave. They spent a week at Long Beach and also visited their parents. *Virginia Lyon* vacationed a week in May at home and a week in July at Holden's Beach with friends. *Shirley Whit and* her roommate attended the Sun Fun Festival at Myrtle Beach and reported a delightful time. *Harrison Lewis* attended the American Right of Way Association National Seminar in Seattle, Washington, May 14-19. *John Daniel* and friends, Horton Rountree, Henry McFayden, and Bill Allen went on a 3-day fishing trip to the Outer Banks recently. They didn't catch any fish, but did capture two porpoises. Touring the entire island in a rented beach buggy was a highlight of their trip. *James Bullock, Andrew McDaniel* and *Charlie Barbee* attended a meeting of the American Institute of Real Estate Appraisers in Asheville April 28-29.

PLANNING—Mrs. Marie Jones is a new new Steno I in Mr. Farmer's office. *Jerry W. Moore* and *Herbert Jones* are new Traffic Recorder I's in *Mr. Bevacqua's* office. *Mr. and Mrs. LeRoy V. Jay* and daughter, Lou, vacationed at Atlantic Beach in June. The following received 5-year pins for service with the Commission: *Jo Ann Harmon, Doris Hall, Maxine Rupy, James A. Woodall* and *Forest F. Smith*. 10-year pins were presented to *James Bradford, John J. Sawyer* and *James M. McCabe*. Congratulations to all of you! *Marvin Cates* was a delegate to the Civitan International Convention in Toronto, Canada in June. Congratulations to Department Head *James S. Burch*, who received his 30-year service pin in June. (Mapping Section) Our sympathy to *Shelby Womble* who lost her father, William W. Webb of Fountain, on June 7. *Barbara Thore* and husband enjoyed a recent weekend at Emerald Isle Beach. *Nellie Tutor* and several friends took in the sights of New York City for an entire week. Former draftsman *Jim Austin* of Hickory is back at work on a temporary basis; and *Charles Vincent* of Murfreesboro has joined the drafting section temporarily while studying law in night school at UNC. *Ben Johnson* took his family to visit relatives in Washington, D. C. on a recent week-end visit.

ROADWAY DESIGN—New faces in the Department are: *Lynn K. Barger, Donald H. Hicks, James O. Litchford, Mitchell B. Russell, William H. Yopp, Ralph E. Biggerstaff* and *Nathan Benson*. Good luck to *Douglass H. Matthews* who resigned June 2 to enter military service, and to *Charles S. Heilig, Jr.*,



RETIRING EMPLOYEES HONORED—Miss Vera Graham, left, 30-year employee of the State Highway Commission is shown at her desk in the Equipment Department on her last day of work before retiring July 1. Department employees gave Vera a steak supper at the Charcoal Steak House and presented her with a white gold wrist watch with special engraving. To be sure Miss Minnie Hornebuckle will get in plenty of traveling after her retirement, Equipment Depot employees and others pitched in and presented "Miss Minnie" with a Ford coupe. Lloyd Young, Equipment Depot Superintendent, is shown presenting her the title. She had been with the Commission for 37 years. In the picture on the right, Mrs. Helen J. Brothers holds a $250 check which was presented to her upon retirement by Department employees. She is shown with Hunter Irving, C. G. Phillips, F. S. Hardy, C. L. Smith, L. D. Hicks, C. R. Penny, H. F. Waller, former boss C. E. Proudley and J. E. Thompson, her boss until retirement. Mrs. Brothers had worked with all of these people for 25 years or more, and had been with the Commission for 37 years.

who resigned to enter summer school at N. C. State College on June 1. Recent vacationists and their destinations were: *David T. Cooke* and wife, Birmingham, Alabama; *Mr. and Mrs. Frank Starnes*, Daytona Beach, Florida; *Raymond C. Crouse*, Fort Lauderdale, Florida; *Mr. and Mrs. R. D. Turner*, Garden City; *W. A. Wilson* and family Atlantic Beach; *T. G. Moody* and wife, Myrtle Beach; *Bob Walker* and wife, Asheville; *Alice Wheeler* and husband, Ocean Drive Beach; *Polly Hildebrand*, Gatlinburg, Tenn.; *Randy Chandler* and friends, Myrtle Beach; *Sam Stancil*, Carolina Beach; and *T. N. Park* and family, New Orleans and San Antonio, Texas. *George H. Holland, Jr.* and *Earl Willis* were on military leave for two weeks in June at Fort Bragg; and *Ernest M. LaFoy* for two weeks at Norfolk, Virginia. Service emblems were awarded to the following: 25-year pin to *Sam H. Hall;* 20-year pin to *A. L. Midyette;* a 10-year pin to *W. A. Wilson, Jr.*, and 5-year pins to: *Raymond C. Crouse, John E. Griffin, Joseph F. Grzebien, Walton J. Page, Orval R. Riffe, Alice C. Wheeler,* and *William E. Willis.* Congratulations to all of you! Cupid was busy during the month of May. *George T. Phillips* was married to Daphne Bryant on May 20 in the Knightdale Baptist Church and *William E. Bissette, Jr.* married Anne Miller, on the same date, in White Memorial Presbyterian Church in Raleigh.

Congratulations to *Paul E. Moore* of Preliminary Design, who recently became a newly registered Profesesional Engineer.

LOCATION—*Frances Smith* took her little daughter, Sharlene, to Morehead City and Atlantic Beach for a recent week's vacation where they enjoyed fishing and boating with friends from Raleigh. Frances' son, Lockewood went to the Y.M.C.A. Camp in Clover, S. C. for three weeks and reported a wonderful time participating in the many interesting camp activities. *A. C. Dodson* attended a meeting of the Landslide Investigation Committee, Highway Research Board, in Steubenville, Ohio May 16-20. He also attended a meeting of the American Society for Testing Material in Atlantic City, New Jersey June 25-29. *Lloyd H. Cook* and *Edgar J. Page* spent a few days in Baltimore, Maryland for the purpose of inspecting the 1961 Official Highway Map and inspection of photographic equipment. Get well wishes are extended to *Louise High's* husband, Roy, who was recently a patient at Rex Hospital and Memoral Hospital in Chapel Hill. Recent vacationists and their vacation sites were: *A. C. Dodson* and wife, Myrtle Beach; *W. D. Bingham* and wife, Myrtle Beach; *J. P. McElrath*, a short trip to Florida; and *Jo-Ann Turner* with little son, Alan, Welcome, N. C. *Boyce Midgette* is glad to have his son, Butch, home for the summer. The Midgettes recently spent some time at their home in Buxton. Congratulations to the following employees who recently received promotions: *A. C. Dodson* from Geologist III to Highway Geologist II; *F. C. Sechler* and *J. P. McElrath* from Geologist II to Highway Geologist I; *A. D. Dickerson* from Highway Engineer II to Highway Engineer III; *D. L. Honeycutt, C. W. Formyduval* and *R. A. Childress* from Engineering Tech Trainees to Highway Engineer I's with the Location Survey Section; and *Jack Matthews* from Engineering Tech Trainee to Stereo Compiler in Photogrammetry. Best wishes to *John Davis* who left the Department to enter Air Force Cadet School in Harlingen, Texas. Fellow workers will miss him and hope to see him again in the fall of 1962, when he will re-enter N. C. State College.

RIGHT OF WAY—*Quita Clifton* resigned May 26 to join her husband, Tommy, in their new home in Cumberland, Maryland. Tommy, a recent graduate of State College, has a job with the Missile Division of the Hercules Powder Company. *Miss Martha Bailey* of Raleigh, a former member of the legislative staff, replaces Quita. Co-workers will miss *Sarah Pickett* of the Appraisal Section, who resigned June 2 to keep house. *Mrs. Celia Truelove*, formerly Mr. Hartsock's secretary, is Sarah's replacement. *Miss Martha Hunter* of Raleigh transferred from Steno I with REA to Steno II as Mr. Hartsock's new secretary. *Ernie Ransdell* has joined *John Holmes* and *Warner Powell* on utilities. *W. H. Webb, Jr.* went to Seattle, Washington to attend the American National Right of Way Association Meeting May 15-19. *C. M. Hartsock, Jr.* attended the Appraisal Conference sponsored by the American Institute of Real Estate Appraisers at Buggs Island, June 2-3. *J. G. Gibbs, Jr.* gave a speech on "The Role of Christian Engineering in Society" at Campbell College during Christian Vocational Educational Emphasis Week. *John A. Holmes, Jr.* and *Warner B. Powell* spent the week of June 19-24 visiting the utility sections of Highway Departments in Trenton, New Jersey, Baltimore, Maryland and Richmond, Virginia. It's nice to have *A. Z. Williams* and *Collis Lewis* back at work after recent illnesses in the hospital. New home owners abound in Right of Way! New addresses are: The *Ronald Thompsons*, 1117 Marlbrough Road; The *Charlie Bass*, 4100 Harvey Road; the *Phil Carrolls*, 2813 Van Dyke Avenue; the *Jack Batchelors*, 2613 Van Dyke Avenue; the *Bob McCoys*, 2525 Remington Road; and last but not least, the *John Fields*, 3408 Sioux Drive. Congratulations to all of you! Division Appraiser *Ronald Thompson's* wife Isabelle, just recently came to Raleigh from Staunton, Virginia to take over the chore of arranging their new home. Our congratulations to *Miss Eleanor Brantley* who was a finalist in the "Miss Universe Pageant", held in Charlotte the weekend of June 2-3. *A. Z. Williams'* son, Bucky, served as a page with the Senate the month of May. The three fishermen, *Charlie Bass, Ronaid Thompson* and *George West* have been

casting the fishing lines quite frequently lately. Any new found luck boys? Congratulations to *Peggy Vollmar's* husband, George, who recently signed a pro-football contract with the Argonauts, a Canadian football team out of Toronto, Canada. George has played end position for N. C. State's Varsity for the past three years, and will be tried at offensive end with the Argonauts. Vacation time has def'nitely arrived. Recent vacationists and their favorite spots are: *Maxine White* and husband, Franklin, N. C. to see his folks; *Cliff Carroll* and wife, Alabama with their relatives; *Sally Bunn*, Carolina Beach; *Peggy Volmar* at home getting her nursery ready for the blessed event in August; *Barbara* and Bob *Amick*, Tampa, Florida; *Bill Tomlinson*, Cocoa Beach, Florida; *Martha Hunter*, Carolina Beach with her family; *Celia* and Jackie *Truelove*, Carolina Beach; *Eleanor Brantley;* Myrtle Beach; *Charlie Bass* and family, Carolina Beach; *Warner Powell* and family, the mountains at Maggie Valley; and *Rose Ann Harris* has spent almost every weekend at Carolina Beach with a weekend granted to Greenville S. C. and a whole week to Myrtle Beach.

ADVANCE PLANNING—Our heartfelt sympathy to *Carolyn Beck*, whose father, C. K. Beck, died May 8 at home in Fuquay Springs. Two new attractions to the staff are *Mrs. Jean Martin*, Steno, and Mrs. Helen Johnson, a June graduate of Meredith College, employed as draftsman. The *R. J. Kimleys* vacationed for two weeks in St. Petersburg, and Miami, Florida.

PURCHASING—Good luck to *Jack Munns* who transferred to the Division of Purchase and Contract as an Assistant Purchasing Agent, July 1. *Linda Johnson* is new Steno I to Vance DcDaniel. Fellow workers miss *Louise Shepherd* who has been hospitalized at Rex with a back operation and hope she will soon be back at work. *Betty Pearce* has been employed temporarily as Louise's replacement. *Marjorie Rose* has been added to the clerical staff for the summer and will attend Woman's College in the fall. *Sue Cox* vacationed in Florida for two weeks in June.

PERSONNEL—*Mary Helen Barden* is a summer employee and will re-enter State College in the fall. *Barbara Springle* is enjoying going to Morehead City every weekend with her in-laws. *Fred Parker* recently took a two-week military cruise with the Navy Reserve. The *Lyman Melvins* vacationed at Wrightsville Beach for a weekend in June. Personnel has moved from Second floor and are now headquartered on the Fourth floor.

CHAIRMAN'S OFFICE—*Cleo Brewer* vacationed at Carolina Beach for a week the latter part of June and returned with a severe case of sunburn.

PUBLIC RELATIONS — Department Head *Sam Beard* went to Baltimore, Maryland several days in June to inspect the official State Highway Map being printed by A. Hoen & Company. *Jewel* and Jim *Adcock* spent a weekend the last of June at Myrtle Beach and returned home with a bad wind-burn.

SECONDARY ROADS—*Carol* and Benny *Helton* enjoyed a recent weekend at Long Beach. New headquarters for the department are now across from the Director's Office, formerly occupied by Advance Planning.

CHIEF ENGINEER'S OFFICE—*Ivan Hardesty*, Assistant Division Commander and Colonel of the 30th Division of the National Guard in North Carolina went to camp for two weeks in June.

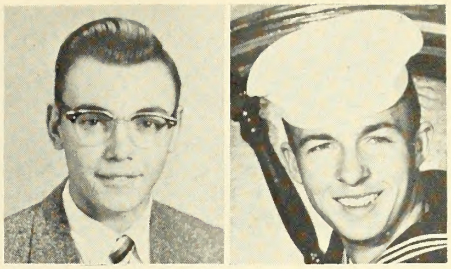
REPRODUCTION—*Earl Williams* spent a week in June vacationing at his "hideaway" in Bear Creek. *Charles Lassiter* and wife report a splendid time for a week at the beach. *Raymond E. Jones* took his family to the beach for a week's vacation. *Ronnie Price* has returned from two weeks military leave at Fort Bragg. *Jack Stone* transferred from Reproduction to the Location Department. *Joe Denton* is recuperating from third degree burns suffered while sunbathing on Carolina Beach. *Garland Mitchell* attended the "Miss North Carolina Pageant" in Greensboro for several days and reports all contestants were "soooo" lovely.

DIVISION ONE

By ROY E. WEST
Division Correspondent

SERVICE AWARD pins have been presented to the following employees of the Hertford Equipment Shop: 35 years—*W. H. Batchelor;* 30 years—*D. A. Carter* and *P. H. Brumbles;* 25 years—*George Carpenter;* 10 years—*R. P. Rodeger, C. C. Pritchard, C. M. Francis* and *R. J. Collier;* and 5 Years—*H. F. Waters* and *C. R. Phelps.*

ON THE GO—Maintenance Supervisor *R. C. Bunch* was in Raleigh to attend the graduation of his daughter, Paige, from Meredith College. She has accepted a job in Rockingham. Bridge Tender *George W. Powell* of Elizabeth City attended his son Richard's graduation from Chowan College. ACC at Wilson is Richard's destination this fall. *L. K. Thompson*, clerk in the Elizabeth City office, spent a week's vacation in the nation's capital.



A/3C William R. Barrett, left, son of Mr. and Mrs. R. E. Barrett of Jackson, has completed his training at Lackland Air Force Base, Texas, and spent a few days leave with his parents prior to reporting for duty at Forbes Air Force Base, Topeka, Kansas, as an air policeman. He is a gradnate of Jackson High School. Don Ray Perry, right, fireman apprentice of the U. S. Coast Guard, completed his basic training at Cape May, N. J., and spent a 10-day leave with his parents, Mr. and Mrs. Jesse C. Perry of Kitty Hawk, before reporting to Portsmonth, Va., for assignment. Don's father is bridge tender of the Wright Memorial Bridge. Before entering service, Don made his home with A. R. Cherry of the Bitumninons Department in Raleigh and attended Millbrook High School.

E. M. Snow was away for several weeks, attending National Guard camp at Fort Bragg. Road Maintenance Supervisor and Mrs. *R. L. Vinson* of Ahoskie paid a recent visit to relatives in Wilmington, Del. Sign Helper and Mrs. *O. R. Williford* and son Jimmie took in the sights of Raleigh and visited the General Assembly, where Jimmie was presented a certificate as an honorary page. *W. W. Prescott*, Highway Inspector, has been transferred back to our division after temporary duty in Division Seven. He was a recent patient in a Danville hospital as the result of an eye injury.

A BIG FISH FRY was held recently by Equipment Supt. *W. J. Davis*, for his employees, and their families. The Thompsons, *L. K.* and *Arthur*, should have enough fish for a big fry too. They caught about 90 pounds of sea mullet on a recent trip to Nags Head.

HERTFORD COUNTY recently held a chapter meeting with barbecue chicken on the menu. Guest speaker was Highway Commission Chairman Merrill Evans.

THE SICK LIST includes *C. E. Stallings* who underwent eye surgery at Norfolk General Hospital and *R. M. Saunders* of the Locating Department, who has been on sick leave since January. A recent hospital patient, *J. F. Wilson*, is back at work now.

THE NEW employee in the Plymouth District Shop is *Dallas Boyd*, mechanic. Sign Shop Foreman and Mrs. *Paul Alford* have moved from Ahoskie to Union.

SYMPATHY is extended to the family of *C. E. Cameron* who died recently. He had been with the Construction Department for 22 years.

DIVISION TWO

By ROY D. FRANKS

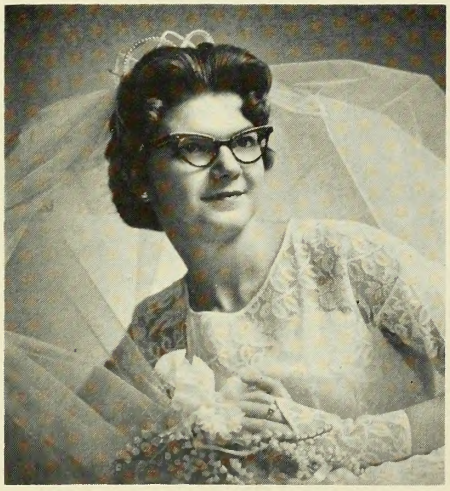
Division Correspondent

NEW OFFICERS of the Pitt County chapter, Employees Association, are: *Leland Briley*, chairman; *James Boyd*, vice chairman and *Rock Martin*, secretary-treasurer. The unit's annual barbecue supper was held in June, highlighted by the presentation of the short drama, "When the Bough Fell," starring *Ruby Harrison*, *Bud Wheless*, *G. A. Taylor, Jr.*, *Ada Briley* and *Leland Briley*.

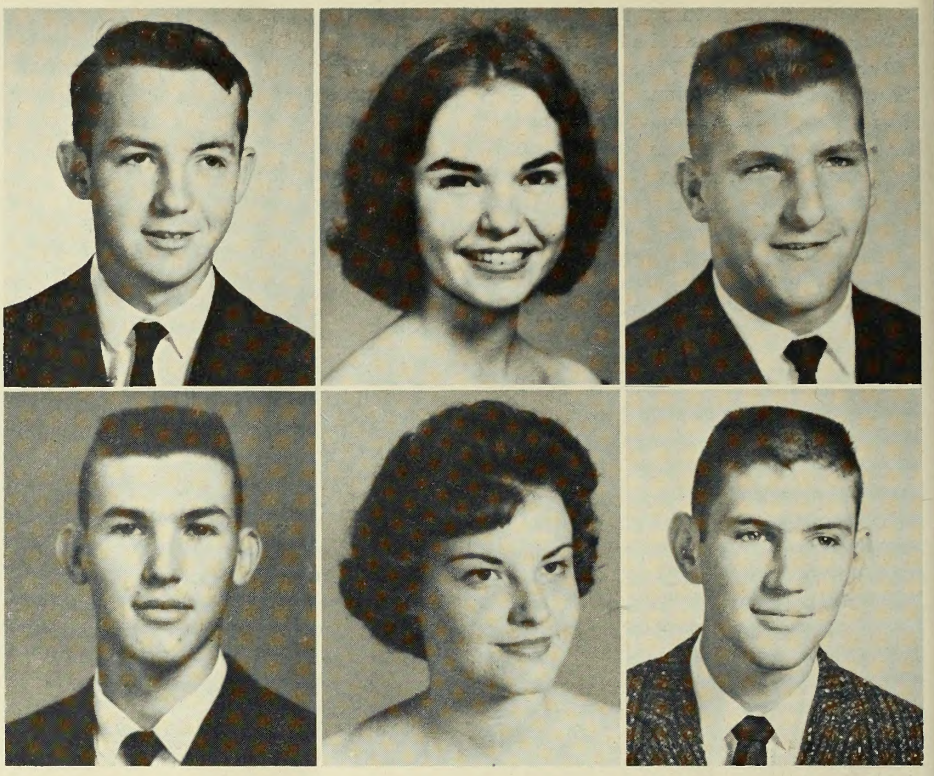
CONGRATULATIONS to Machine Operator and Mrs. *Albert L. Mallard* of Jones County, who announce the birth of twin boys; and to the *J. A. Halls* on the birth of a son. Congratulations also to *Robert Merritt*, Resident Engineer, who has completed Division One of the highway engineering course with ICS.

GET WELL QUICK, *T. R. Reynolds*, and Mrs. *C. O. Nunn*.

LENOIR COUNTY unit held a pork and chicken barbecue supper recently in the equipment garage. Safety certificates and pins, as well as service pins, were presented to the employees.



Mrs. James Clyde Futrell, II, of Wilmington, is the former Barbara Ann Wells, daughter of Mr. and Mrs. J. C. Wells of Raleigh. The wedding took place June 25 in Ephesus Baptist Church, Raleigh. The groom is the son of Mr. and Mrs. C. L. Futrell of Cary. He attended State College and is now working with the Location Department in Wilmington, where they are making their home.



Charles Thomas Taylor, top left, graduated from Ahoskie High this spring. The son of Mr. and Mrs. George T. Taylor, his father is superintendent of the Hertford County Prison Unit. Sarah Frances Parker, top row, center, is the daughter of Maintenance Foreman and Mrs. M. R. Parker, Sr., and a recent graduate of Jackson High School, where she was a cheerleader and a member of the Beta Club. She is the 1961 Dairy Princess for Northampton County. Next fall she will study music and history at Meredith College. Robert Carroll Vanderberry, Jr., top, right, honor graduate of Ahoskie High School, was presented the Jaycee "Teenager of the Year" Award recently. He was president of the Tri-County Beta Club and made all conference in football. He plans to enter the University of North Carolina as a pre-med student. Bobby is the son of Mrs. Nedra Vanderberry, stenographer in the Division 1, District 2 office. Bottom row, left, is Melvin Douglas Barrett, son of Machine Operator and Mrs. R. E. Barrett. He graduated from Jackson High School where he received a trophy as the outstanding athlete of the year, and will attend East Carolina College, where he has a $100 scholarship. Barbara Lawrence Taylor, center, is the daughter of Machine Operator and Mrs. W. R. Taylor and a 1961 graduate of Seaboard High School. She plans to attend Louisburg College, where she has a $250 scholarship. Melvin Chamblee, right, is the son of Maintenance Foreman and Mrs. Vernon D. Chamblee and a recent gradnate of Ahoskie High School.

ON THE MOVE is *James M. Turnage*, transferred with the Construction Department from Kinston to Division Five. Carl, *Bratha* and Carl *Abee*, Jr., spent a long weekend at Atlantic Beach. Mrs. Abee works in the Division Two shop.

WE EXTEND deepest sympathy to the family of *N. A. Sykes*, New Hanover County bridge tender, who was killed in an auto accident; and to the family of *John E. Powers*, who suffered a fatal heart attack.

IT'S A PLEASURE to have retired employees pay us a visit. We were glad to see former Division Engineer *C. E. Brown*, former Resident Engineer *J. K. LeGwin*, and former Road Maintenance Supervisor *A. K. Mallard*, who came to see us recently.

DIVISION THREE

By IRENE C. HEWETT

Division Correspondent

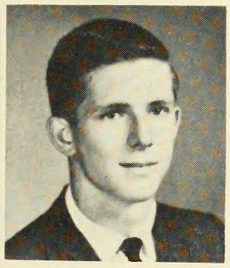
SUNNY FLORIDA was the recent destination of the *R. V. Bibersteins*, who went to Clewiston, to visit their daughter. *Mrs. Leo Wallace*, secretary to our Division Engineer, took a week's vacation while her sister was home from Jacksonville, Fla.

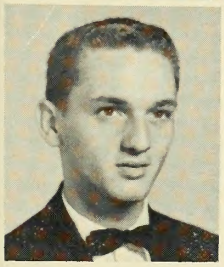
WELCOME to the ranks, *Mrs. Lois S. Collins*, who replaces *Mrs. Minnie Mae*

Smith in the District office at Clinton. Mrs. Smith says thanks to all her co-workers who have made the past 20 years pleasant for her. We will miss her but wish her many happy years of retirement. Welcome also, *Richard L. Kelly*, who is working this summer as an Engineering Aide out of Resident Engineer *W. C. Cooper's* office. Richard was a student at Wilmington College the past two years.

WE'RE GLAD to have *Joe Bannerman* back at the office after his recent stay in the hospital. *Carl L. Mintz* is back at work after illness. *J. B. Silance* of Onslow County is still out due to an injury on the job. We hope *W. R. Smith* will soon be back operating his bridge again. He has been out sick since early March. A speedy recovery is wished also for *N. T. Pickett*, hospitalized at this writing.







Wilma Lee Howard received her degree in chemistry at the University of North Carolina in June and is now working at the Research Center at State College. "Willie" is the daughter of Mr. and Mrs. J. O. Howard. Her dad works with the Sampson County Maintenance Department. Stephen H. Hamilton, top right, is the son of Resident Engineer Joe W. Hamilton, Jr., of Wilmington. He is a recent graduate of New Hanover High and plans to continue his education at State College. Terrence Henry Smith, bottom left, is the son of Division Three Machinist Henry Smith. He is a recent graduate of Wilmington Junior College and plans to attend East Carolina College this fall.

The speeding motorist careened into a telephone pole and brought the wires crashing down. When he regained consciousness, his hands were clutching the wires.

"Thank goodness," he breathed, "a harp."

What most people are looking for these days is less to do, more time to do it, and more pay for not getting it done.

DIVISION FOUR

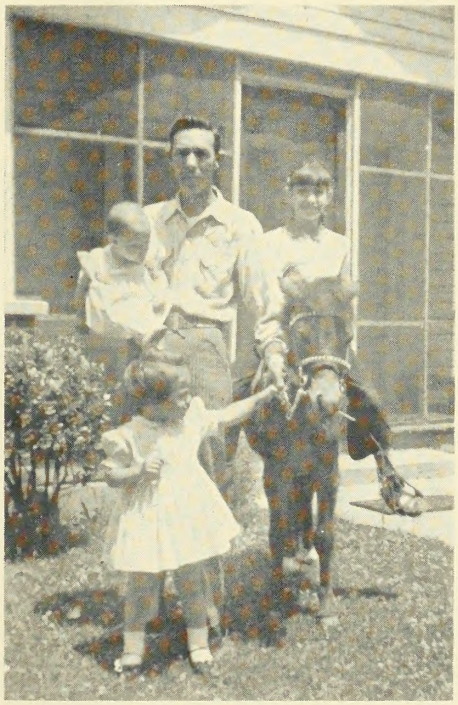
By JERRY BOYKIN

Division Correspondent

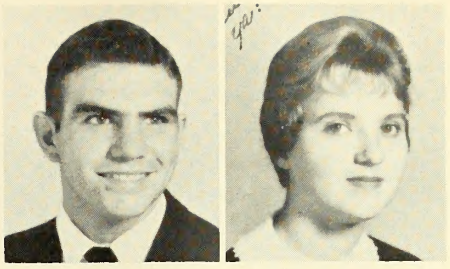
THE FISH were really biting the day *C. F. Williams* of Nash County Equipment Department, accompanied by Mrs. Williams and Mrs. *G. L. Winstead*, went out on the Carolina Queen. They brought back some 250 pounds of red snappers, sea bass, amberjack and dolphin. *L. E. Pierce* spent his vacation fishing at Morehead and brought back a lot of evidence too.

THE LURE of the big city, New York, no less, attracted the *Arthur Fergusons* during their two-week vacation. *N. E. Pridgen* visited his son in Pensacola, Fla., during his vacation, and *M. P. Yount* spent a few days in Hickory.

WELCOME BACK to the following men who have been out due to illness: *R. C. Wallace, D. T. Bass, Elton Fulghum, Homer Bottoms, Edgar Bryant, J. J. Matthews, Bill Garris, E. D. Harlow, L. H. Little, J. C. Morris* and *W. A. Briley*. Get well wishes go out to *W. E. Wagner*, hospitalized in Roanoke Rapids and *W. F. Taylor*, released recently from Edgecombe General Hospital after treatment for injuries received in an accident. He is still under the care of a doctor and no date has been set for his return to work.



Milton D. Bradley of the Maintenance Department at Weldon is shown here with his daughters, Kathryn 9, Pamela 3 and Laura, 7 months. Kathryn is shown on "Thunder", their pet pony.



Willie Moss, left, son of W. G. Moss who is employed with Nash County Maintenance, gradnated from Benvenue High School this spring where he was president of the Senior 4-H Club and winner of the Nash County 4-H Public Speaking Contest. He won a $100 bond and a $100 scholarship as district winner for the best school bus driver and will compete in the State contest. Willie also won the Nash County 4-H Public Speaking Contest. Margaret Cook, right, is the danghter of L. E. Cook, also of Nash Conuty Maintenance. A gradnate of Rocky Mount Senior High, she plans to stndy beauty cnltnre at East Carolina College in the fall.

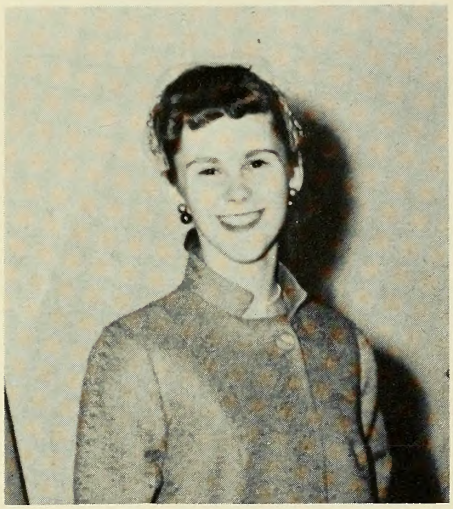
HAPPY BIRTHDAY to the following who celebrate their day in July: *R. C. Anderson, S. L. Harlow, A. J. Hearne, J. L. Jacobs, B. A. Mayo, O. C. Robertson, J. P. Ward* and *Josh Webb*.

CONGRATULATIONS to Haywood D. Cochrane, Jr., son of *Mrs. Frances P. Cochrane*, secretary in the District One office, who received the History Medal for scholastic excellence in history for the seventh grade, during commencement exercises at Weldon High. Our part-time soldiers, *Sid Holmes, Gene Proctor* and *J. E. Cooper* have completed two weeks summer training at Forth Bragg.

WELCOME, *Donn Simon*, who is working with the Construction Department in Johnston County for the summer. *W. E. Coggins* has been transferred from Maintenance to Traffic Services.

SAFETY AWARDS have been presented to the following: *S. H. Conner, J. E. Cooper, A. J. Hearne, H. L. Light, C. W. Little, Raymond McWilliams, C. S. Powers, W. L. Whitaker, W. E. Coggins, Wilson Edmondson, L. V. Hart, Will Henderson, R. G. Manning, L. M. Norville, L. R. Piver, A. A. Taylor, J. M. Williams, J. C. Alston, J. B. Aycock, J. E. Blackwell, Z. E. Mohorn, A. E. Morris, J. C. Morris, W. M. Whitley, A. L. Anderson, R. C. Armstrong, H. L. Hale, R. A. Jenkins, A. C. Harlow, T. R. Morris, H. L. Price, O. C. Robertson, Matt Sledge, C. G. Webb, T. W. Wilson, L. L. Wood, J. W. O'Neal, J. W. VanLandingham, Josh Webb, E. H. Crawley, J. C. Parker, W. E. Wagner, Herbert Walker, R. V. Brett, J. H. Carter, J.*

E. James, W. W. Manning, B. A. Mayo, E. E. Mayo, William Thigpen, J. R. Walston, M. D. Bradley, J. G. Neal, W. B. Parker and *Edward Stansburg.*



Kathryn Abernethy, daughter of Mrs. Pat Abernethy, stenographer in the District Office at Nashville, recently made two appearances in fashion shows on television, modeling an outfit made in her home economics class. The outfit won first place in her school contest and third in the finals against winners from other schools. Also on the show was Jo Ann Williams, daughter of T. H. Williams of Nash County Maintenance.

DIVISION SIX

By STEVE AMMONS

Division Correspondent

GET WELL WISHES go out to *F. W. Hammond*, who has been out of work due to extended illness; as well as to *Williard Tatum, J. H. Tatum, L. L. Campbell, David Nance, G. E. Holder* and *C. A. Jackson.*

DEEPEST SYMPATHY is extended to *W. E. Tadlock* and *L. E. Horne* of Cumberland County Maintenance, who lost their wives recently.

SYMPATHY is extended to Maintenance Foreman *J. M. Butler* in the death of his mother, Mrs. Mattie B. Butler.

NAMES on the sick list include Truck Driver *Amos Howell;* Maintenance Yard Assistant *R. E. Johnson;* Machine Operators *R. L. Johnson* and *David Nance.*

EVERYONE is going to miss Machine Operator *Clarence F. Holland* after his July retirement. He has 36 years of service to his credit, beginning work with the county back in 1925. The Hollands, who have three children and seven grandchildren, live at 2911 Murchison Road, Fayetteville. We wish him a most happy retirement.

CONGRATULATIONS to Machine Operator and Mrs. *W. W. Holland*, on the birth of a son, Roy Gist, in June.

DIVISION SEVEN

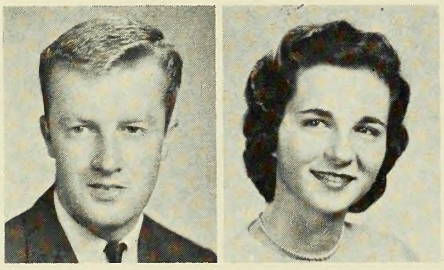
By P. L. WELCH

Division Correspondent

VACATION SEASON has started and many of our people are already taking time out from work for relaxation. *C. E. Williard* and family went to Florida for a week; *J. S. Rumley* and family, accompanied by *N. R. Petroff's* wife, visited in St. Louis, Mo., for a week. *A. M. Ball* reports good luck fishing at New Topsail. *E. E. Chism, C. C. Smith, D. M. Hawkins* and *P. D. Carter* went fishing at Long Beach. The *T. C. Parliers* went to Boone and other points in Western North Carolina, while the *J. A. Roachs* and the *M. W. Conners* headed for the Great Northwest and Canada. Virginia Beach was the vacation spot chosen by the *R. F. Comers* and *W. E. Wilsons* and the *B. D. Mayhews* went to Richmond and other points in the Old Dominion. *R. C. Biggs* toured Florida; Mr. and Mrs. *C. J. Shreves* went to Atlantic Beach and *George R. Bouldin* attended the Southern Farm Tour. Vacationing also were the *O. N. Alleys, J. C. Martins,* and *C. F. Wittys,* who did some fishing during their stay at Long Beach. *Estel Hayes* and *L. W. Handy* report a 70 lb catch during a fishing trip to Topsail Beach. *M. C. Clymer* took a week off in June, and *W. B. Fulp* spent three days at the Methodist Conference at Lake Junaluska. Not much of a vacation, says *H. G. Rudd,* who was on jury duty for a week in June.

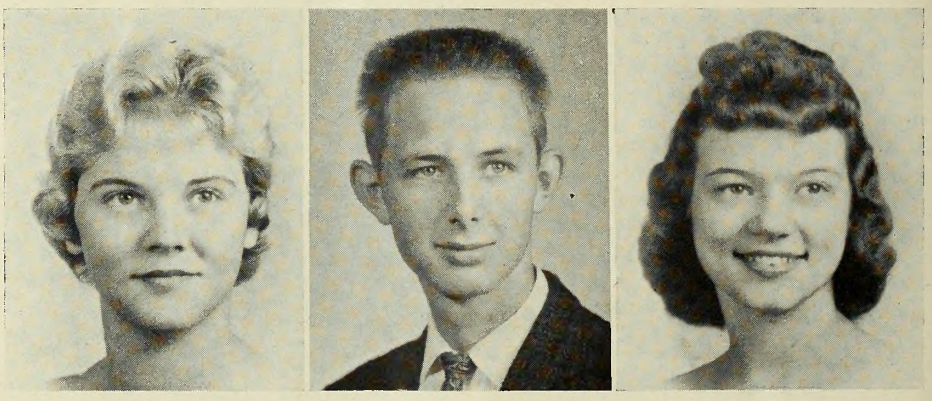
SYMPATHY is extended to Prison Guard *J. E. Holland* in the death of his mother and to the family of Mrs. Carl F. Vestal who died in May.

GET WELL WISHES are extended to *O. C. Holland* and *H. F. Sherron.* It's good to see *J. E. Parks* back at work after nursing a broken arm for some time. *R. L. Shelton* is back following an operation and *G. C. Baker* has returned following a bout with pneumonia. *G. A. Powell's* broken shoulder is reported on the mend now.



Marion Wayne Atkinson, son of Mr. and Mrs. Guy W. Atkinson, graduated from State College in May with a degree in civil engineering. Wayne's father is a Maintenance Foreman in Bladen County.

Sandra Moore Green, daughter of District Engineer and Mrs. E. L. Green of Whiteville, is a Woman's College graduate, with a degree in primary education. She was president of the senior class and was named the outstanding senior. She plans to teach in the Greensboro City Schools this fall.



1961 GRADUATES—Judy Lane Mayhew, left, graduated from Wentworth High School in May. The daughter of Mr. and Mrs. Bernard D. Mayhew, she plans to attend Woman's College. Bobby Witty, center, son of Mr. and Mrs. C. F. Witty of RFD Wentworth, had a school perfect attendance record for 12 years and graduated with the class of 1961 at Wentworth High. He will attend Kings Business College in Greensboro. Barbara Wilson, right, the daughter of the Oscar D. Wilsons of Reidsville, Rt. 4, also graduated from Wentworth High this spring. She received the Award of Merit from Underwood Corporation as the most outstanding business education student. Her junior year, Barbara received the "best typist" award. In high school, she was a member of the Beta Club, and runner-up twice in the "Miss Wentworth High" beauty pageant.

OUR SYMPATHY goes out to the family of Truck Driver *Bruce Wood*, who died June 1, and to *Broadie Riley*, who lost his brother Earl.

WELCOME BACK, *Mrs. Mary Dot Jackson*, of the Graham office, who has been out several weeks due to illness. We wish a speedy recovery for *Charles E. Murphy*, *Robert G. Graves* and *L. G. Tilley, Jr.*

DIVISION EIGHT

By VIRGINIA WILLIAMSON

Division Correspondent

THERE'S A PROUD new grandpa in our midst. He's Sign Foreman *Fred W. Ball*, whose first grandchild, Nancy Elaine Hogan, arrived in April. Mr. and Mrs. *Lester Cockman* are the proud parents of a son, born in April. Lester is with Construction, working in the Asheboro area.



Madelyn Farrell is the two-year-old daughter of Highway Inspector and Mrs. Horace Farrell of Siler City.

THE SUDDEN death of *E. E. Hough* of the Sign Department saddened all of us. He had been with the Highway Department for 35 years. Sympathy goes out to his family, as well as to Maintenance Supervisor *J. L. Stewart*, who lost his sister recently; to *Joe Sneed* who lost his mother and to *Horace Ledbetter* in the death of his father.

CONGRATULATIONS to *C. B. Cole* on his promotion to Maintenance Supervisor for Moore County; to the *J. L. Bowmans*, who have moved into a new home in Southern Pines; to *Earleen Lambeth*, daughter of *Earl Lambeth* on her graduation from Farmer High School; and to Crowson H. Hunt, son of Machine Operator and Mrs. *B. L. Hunt* of Randolph County, a recent graduate of High Point College. Crowson, who received a B. S. degree in business administration, plans to enter service soon.



Shirley Jean Patrick, left, daughter of Donglas Patrick of the Landscape Department, Division 8, graduated from Hamlet High this spring, and plans to continue her education at Kings Business College. She was ont of school for a portion of the past several years due to illness, bnt still came through with flying colors. Sara N. Moore, daughter of Maintenance Supervisor and Mrs. C. N. Moore of Chatham Connty, served as pagette in the House of Representatives. She is a sophomore at Jordan Matthews High in Siler City.

PLANNING a middle aisle trip is Betty Lou McFarland, who has worked in our Division office for the past four summers. A graduate of Guilford College, she is working at Quaker Lake Camp this summer. Her marriage to Alan Atwell of Greensboro, will take place August 20.

TWO EMPLOYEES with a total of nearly 60 years service have joined the ranks of the retired. *Charles Ernest Glasgow*, a veteran of 40 years service, retired in April. Fellow employees gave him a $50.00 savings bond. Road Oil employee *Herbert L. Norris*, who had 20 years service, retired in June and already has been heard saying "I feel like I ought to be out there driving that truck."



These attractive youngsters are the children of Staff Engineer and Mrs. William Cherkas who recently moved to Aberdeen from Raleigh. Left to right: Lisa, 5; William, 4 and Craig, 2.

DIVISION NINE

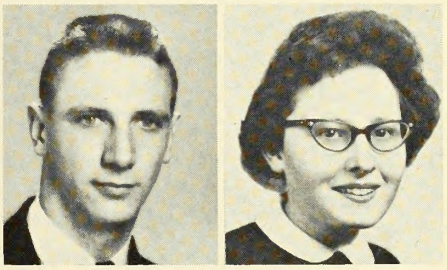
By R. B. FITZGERALD

Division Correspondent

WEDDING BELLS rang out for *R. G. Turner*, Engineering Aide I in the Construction Department, and Barbara Willard. Best wishes to the happy couple.

CONGRATULATIONS to Ramona Anne Rothrock, daughter of *W. D. Rothrock*, who has completed the one year laboratory technician course at Moses H. Cone Hospital in Greensboro. A graduate of Woman's College, she plans to continue her work at Cone Hospital.

IT'S A GIRL for the *J. W. Davenports*. Kimberley Paige arrived on May 20th. Her dad works in the Construction Department in Winston-Salem. Resident Engineer *W. S. Sizer* became a grandfather for the first time when William III was born. Truck Driver and Mrs. *W. L. Crouse* of Davidson County are proud new parents also.



Clavin Lee Safrit, son of District Mechanic L. A. Safrit of Salisbnry, is a recent graduate of West Rowan High School and is now employed by Food Town Stores in Salisbnry. Judy Carpenter, right, daughter of Mrs. Edith Carpenter who is a steno in the Right of Way Department, graduated from R. J. Reynolds High School in Winston-Salem. Jndy is working for R. J. Reynolds Tobacco Co., this summer, and plans to attend Atlantic Christian College this fall.

A FAREWELL party was held for the Appraisal Department at the Frontier Supper Club. Due to the need for additional space, Appraisal moved its offices from the Division Office building to the Wachovia Bank Building on Stratford Road.

OUR SYMPATHY is extended to the family of Road Oil employee *Jesse D. Dallis*, who died June 12; to *E. L. Hull*, whose brother Paul died on April 17; to *C. B. Seats*, whose brother Howard died May 10 and to *R. L. Chew*, in the death of his father-in-law, E. J. Cox.



HEADS OPTIMISTS — W. E. "Bill" Woodruff, Highway Inspector with the Division 10 Construction Department, has been elected president of the Albemarle Optimist Club for the coming year. A native of Alleghany County, he is a graduate of Pfeiffer College. He is married to the former Hilda Beam of Badin and they have two daughters, Kim, six, and an infant daughter, Leslie Ann, born June 19. Woodruff is also president of his Sunday School class at Albemarle's First Baptist Church, and is vice president of the Stanly County Young Democrats.

DIVISION TEN

By J. W. JONES

Division Correspondent

THE DEATH in late April of *Boyce B. Poplin* saddened all of us. Although he was only 37 years old, he had worked for the Highway Department for the past 17 years. Our sympathies to his family.



Kenneth M. Irvin of Division 10 Maintenance, holds his pride and joy, Angela Beth, photographed at age 4 weeks.

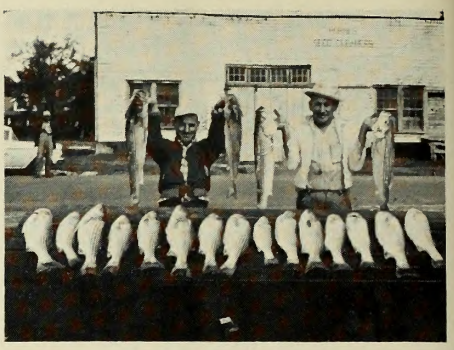
GOOD LUCK to Maintenance Foreman *D. K. Lowder*, who retired July 1st after more than 31 years of continuous service with the Highway Department. A native of Stanly County, he grew up in the area along the banks of the Yadkin River, helping his father operate the plantation and Lowder's ferry. For several years he operated Dumas' ferry, between Richmond and Anson Counties, across the Yadkin River now spanned by a steel concrete bridge on NC 109. A batchelor, he makes his home in a house trailer near Albemarle, and plans to spend his retirement boating and fishing.



Mrs. John Arthur Reams, prior to her recent marriage, was Midge Smith, daughter of Road Oil Supervisor and Mrs. W. T. Smith of Badin. The groom's parents are Mr. and Mrs. W. A. Reams of Richmond, Va. They are making their home in Richmond where the bride is employed by LaVogne Beauty Salon.

THERE WERE high hopes as *F. B. Mangum, T. L. Patterson, J. N. Bost, C. H. Faggart* and *W. M. Crowder* took off for Cherry Grove Inlet. Trolling all day, Faggart caught one nice flounder, Bost six. The other three were skunked. (and they are supposed to be fishermen of renown).

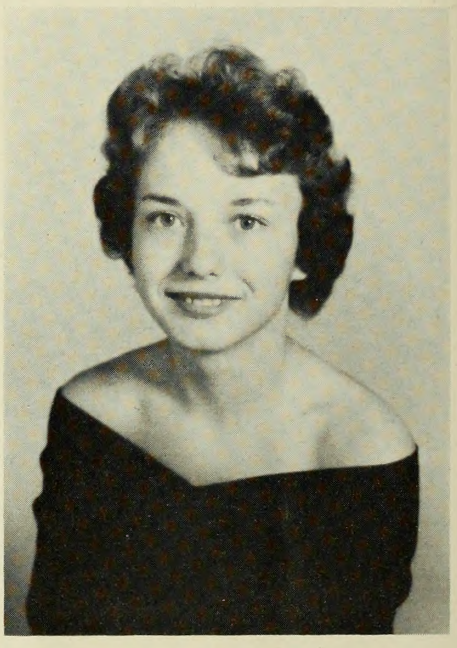
A SPEEDY RECOVERY is wished for *W. "Andy" Little*, Resident Engineer, following an operation. Glad to see *Floyd Penninger* back after a long illness. We hope Road Oil Supervisor *W. T. Smith*, who is hospitalized at this time, will be back at work soon.



Howard G. Mitchell, left, and Bob Glenn had phenominal luck fishing at Santee-Cooper Lake in South Carolina, landing 19 rock bass weighing a total of 200 pounds. The largest tipped the scales at 19½ pounds. Mitchell works in Division 10 Road Oil.

CONGRATULATIONS to Eddie Finison, son of District Engineer *E. M. Finison*, who was tapped as a member of the National Junior Honor Society at McClintock Junior High, where he has been elected president of the Student Council for next year.

A RECENT VISITOR was former Division Engineer *M. E. Beatty*, now of St. Petersburg, Fla. *Billy B. Mason* of the Construction Dept., spent his summer training period with the Army Reserve at Fort Leonard Wood, Mo.



Mr. and Mrs. Howard G. Mitchell annonnce the engagement of their danghter Sandra, to Tommie Hildreith, son of Mrs. Mamie Hildreith of Wadesboro. Mr. Mitchell works in the Road Oil Department. The wedding will take place in September.



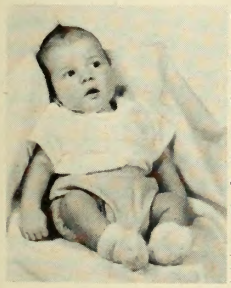
Mrs. Dewey B. Starnes annonnces the engagement of her danghter, Kathryn, to Charles Brnce Yokely, son of Mr. and Mrs. Raymond B. Yokely of Denton. The bride-elect's father worked in the Road Oil Department for 10 years. The marriage will take place in September.

DIVISION ELEVEN

By CORA LEE GREER

Division Correspondent

SERVICE AWARDS have been presented to several employees in District 1: 35 years—*C. G. Ashby* and *R. A. Moser;* 30 years—*K. E. Edwards;* 25 years—*W. H. Busic;* 20 years—*D. D. Duncan;* 15 years—*R. M. Bradshaw, W. R. Pendleton, C. A. Amburn, T. C. Hamm* and *M. C. Sparks;* and 10 years— *V. R. Handy, T. A. Harless, E. L. Phillips* and *C. R. Spears.*



Mark Anthony Trivette was one month old when he posed for this picture. Born March 15, tipping the scales at slightly over 10 pounds, he's the son of Engineering Aide and Mrs. Dennis Trivette of Boone.

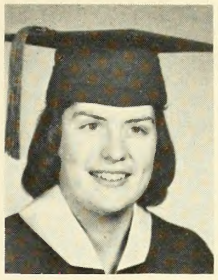
AN EARLY VACATION at Carolina Beach was enjoyed by *D. S. Ingram, H. F. Stoker* and *C. G. Golden. Hap Bivens* and *Lunday Hart* caught 12 nice rock bass on a recent trip to Santee Cooper Lake. A pleasant weekend was enjoyed by *Jay Brookshire, Wake Watts* and *Jimmy Billings* of North Wilkesboro and *H. C. Rhudy* of Raleigh, who pitched camp in the wilds of Watauga County near a famous fishing stream. They reported a nice catch of brook trout and brown trout, but encountered a few snakes while getting them. Golf enthusiast *Penny Hollingsworth* has been playing in several tournaments and seems to be doing quite well.

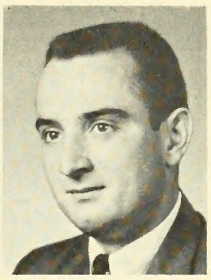


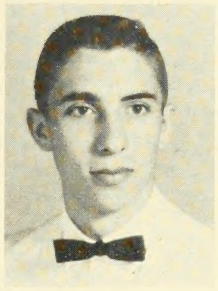
Mrs. Craig J. Smith, Jr., is the former Elizabeth Ross Ashby, daughter of Charles Ashby (Construction Dept.) and Mrs. Ashby of Elkin. She is employed in the office of contractor George W. Kane of Winston-Salem and the groom works for Western Electric.

BACK AT WORK AFTER illness are *Ralph Bradshaw, Hayden Moxley, C. A. Amburn, G. C. White, D. W. Hodges, P. D. Freeman* and *D. E. Baldwin.* We send get well wishes to *R. L. Souther, C. M. Dancy, I. W. Smith* and *W. A. Moser.*

WELCOME to new employees: *J. F. Bivins, H. C. Gunter, S. S. Roberts, O. C. Smith, R. L. Crouse, J. H. Absher, T. G. Bennett, Jr., A. R. White, C. C. Wagoner* and *R. R. Folger. Bill Brookshire,* son of Office Engineer and Mrs. *W. J. Brookshire,* and a recent graduate of Mars Hill, is working with us for the summer.





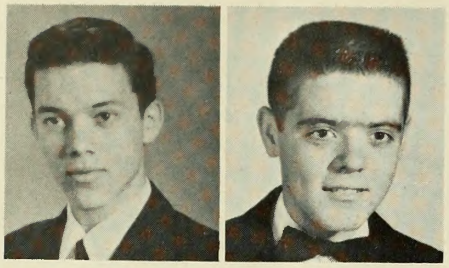




Sue Wiseman, top left, danghter of Maintenance Foreman and Mrs. Don Wiseman, is a 1961 graduate of Crossnore High, where she was president of the Student Council and a member of the girls basketball team for 4 years. She plans to attend Pfeiffer College. Don Koontz, top right, son of Assistant Division Engineer and Mrs. Howard E. Koontz of North Wilkesboro, has completed work on his master's degree at the University of North Carolina and is working in the Industrial Relations Department of Celanese Corporation at Narrows, Va. E. Ford King, bottom left, is the son of Resident Engineer and Mrs. E. Ford King, Jr., of Boone, and a recent graduate of Appalachian High, where he was an outstanding athlete. He won several medals in wrestling and is the current State champion in the 145 pound class. He will continue his education at King College in Bristol, Tenn. Grace Dean Walsh, bottom right, a graduate of Wilkes Central High, was recently crowned Miss Wilkes County of 1961. In addition, she is the Wilkes Dairy Princess. She was an all-conference basketball player and a winner in the 4-H Club dress making competition. Her parents are Maintenance Foreman and Mrs. W. D. Walsh of North Wilkesboro.

SYMPATHY is extended to *R. E. Richardson* in the death of his father; to *Gilbert Mast* whose brother died recently and to the families of *Frank Blair* and retired employee *L. R. Kiger.* Mr. Kiger worked with Commission for 34 years.

AREA Maintenance Engineer *J. H. Councill* reports a new grandson—this is two. Congratulations! It's a girl for Truck Driver and Mrs. *J. D. Goodman.*

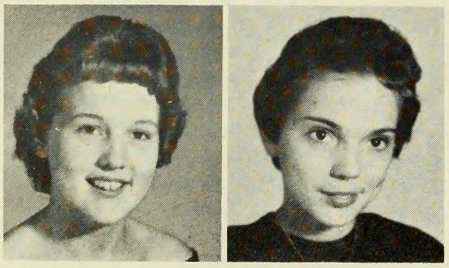


Frank Allen Burris, left, son of C. L. Burris, graduated from Oakboro High School and will attend Kings Business College in Charlotte this fall. Ronald Keith Hatley, son of P. G. Hatley, also graduated from Oakboro High School this year.

ON THE GO—Truck Driver *Webb Weatherman* visited his son, Webb, Jr., who is in the Air Force; and *Meredith McDaniel*, secretary in the Boone District Office, along with her family, spent a recent weekend at Myrtle Beach.

GET WELL wishes are extended to *Archie Dancy* and *Custer Wallace*. *G. H. Woodring*, *V. L. Johnson* and *C. M. Smith* have returned to work following extended illnesses.

BEST WISHES for a long and happy retirement to Road Oil Foreman *Clarence Swift*, who retired in July after 24 years service with the Highway Department, and to Gang Foreman *E. C. Greene*, who retired in May after 24 years service.



Phyllis Ann Lattimore, left, was married July 23rd to Gene Blackburn. The bride is the daughter of Mr. and Mrs. W. W. Lattimore. Her father works in the District 1 Maintenance Department. Mrs. Lewis Bruce Hopper, right, prior to her recent marriage, was Doris Allen, daughter of Mr. and Mrs. H. L. Allen. Her father works in District 1 Maintenance.

What's accomplished today is done because someone thought about it yesterday.

DIVISION TWELVE

By JEAN CLINE

Division Correspondent

PLANNING THAT center aisle trip is *Brenda Moser*, secretary in the Right of Way office. She is engaged to Tommie Weathers. Congratulations are in order for this fine couple, as well as for the Jack Lackeys, who were married in June. Mrs. Lackey is the former Betty Peek, daughter of the late Assistant Division Engineer J. D. Peek, and Mrs. Peek.

WELCOME to Right of Way's newest employee, *Durham Whisnant*. A welcome is extended also to *Calvin Scism*, District 1 employee, who is back at work after an extended illness. *J. N. Beck*, District 1 employee, is back at work following a brief illness.



Mrs. John Howard Abernathy, prior to her marriage was Betty Alice Ferrell, daughter of Mr. and Mrs. Hugie E. Ferrell of Orgas, West Virginia. The groom is the son of Division 12 Equipment Superintendent and Mrs. J. E. Abernathy.

CONDOLENCES to the family of retried Sign Department employee *Arthur Lee Eagle*, who died in June.

TRYING THEIR LUCK at Lake Douglas, Tenn., have been *J. C. Lucas*, *C. O. Smith* and *O. D. Bridges* of District 1 Maintenance. No report on the catch. The W. G. Edneys and daughter Debbie planned a July vacation. *Mrs. Edney* is a secretary in the Division Office Building.



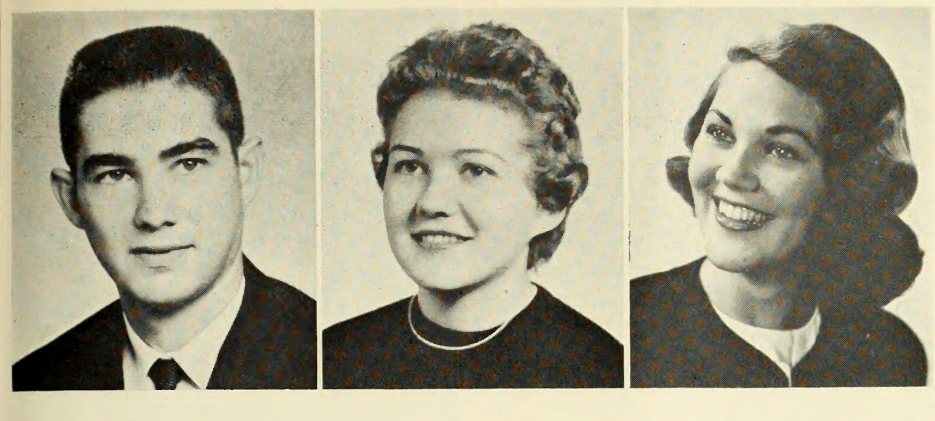
Miss Barbara Ann Hendricks of Pelzer, S. C., became the bride of Thomas Fulton Wyke of Shelby on June 3. The bride is the daughter of Mr. and Mrs. James Rhett Hendricks of Pelzer and the groom is the son of Division Engineer and Mrs. W. W. Wyke of Shelby.

WE ENJOYED seeing retired employee *R. W. McAbee* when he dropped by for a recent visit.

IT'S A BOY for Mr. and Mrs. *Howard Dean Jackson*. Congratulations.

DID YOU MISS *K. E. Mauney* recently? He spent several weeks attending National Guard Encampment at Fort Bragg.

A NUMBER of our people will receive service emblems this year. They include: 25 years—*John Bradburn, L. D. Gaither, B. W. Gibson, J. C. Lucas* and *E. C. McKinney;* 20 years—*J. W. Wray, E. M. Bailey, J. A. Black, T. H. Cloninger, C. C. Heavner, C. H. Kiser* and *E. W. Lipscomb, Jr.;* 15 years—*A. F. Simmons, D. H. Welborn, H. H. Austin, R. L. Combs, J. W. Fox, W. H. Johnson, L. C. Mills, L. N. Rink, F. L. Sherrill, Fred Snow, T. C. Walker, F. E. Abernathy, R. L. Cook, A. L. Garrison, Clarence Garrison, R. L. Haynes, P. L. Kiser, Glenn Moore, N. R. Ramsey, W. B. Wellmon* and *E. A. Crowder;* 10 years—*G. G. Bess, R. A. Harrill, M. W. Hughes, K. E. Mauney, R. A. Queen, D. H. Spangler, F. T. Wagner, Joe Camp, C. L. Walker, C. R. Wright, J. A. Spangler, R. G. Butler, A. L. Eskridge, J. H. Houser, R. V. Newton, E. A. Levan, A. J. Mitchell, H. D. Robinette, G. W. Rupard, J. T. Watt, B. E. Burton, C. B.*



Elizabeth Ann and Lewis Carpenter are the children of Area Foreman and Mrs. Lewis Carpenter of Dallas. Lewis, Jr., gradnated in June from State College with a degree in indnstrial arts and is working for Commercial Credit Corp. in Asheville. Libby is majoring in elementary edncation at Appalachian State Teachers College, where she is a rising jnnior. Taking it easy and working too this summer is Anna Ruth Current, right, daughter of Mr. and Mrs. R. E. Current of Taylorsville. A recent gradnate of Wake Forest College, she is now on a tonr of the United States, employed by Kelly Girl, Inc. She and three of her classmates work a week or two in different cities, then travel for a week sight-seeing en ronte to the next city. They will return in September. Her father is employed with the Statesville Construction resideney.

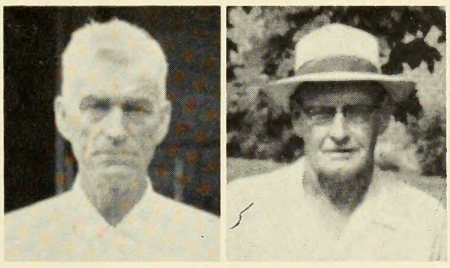
Huss, D. W. Morgan, D. L. Pruett, A. R. Royster and *Thurman Runyans;* and 5 years—*Hal C. Crowder, Horace Lowrance, P. B. Bentley, J. F. Crouch, W. G. Hunt, J. K. Jarrett, J. P. Morrison, R. A. Parker, L. D. Peeler, M. P. Hill, J. W. Alexander, L. R. Anthony, C. C. Mauney* and *H. E. Miller.*

MANY FRIENDS of *J. B. Murdock* will be glad to know that he is making steady improvement at Davis Hospital, Statesville. He was injured when struck by a passing car while he was at work. There has been an "epidemic" of accidents among family members: *R. M. Barnette's* son Barry injured an ankle; *C. F. Costner's* son suffered a cut arm; *W. D. Jolly's* son and daughter have been sick; *J. R. Robinson* underwent minor surgery; *H. B. Rhyne's* daughter cut her foot on a piece of glass; Clarence, son of *H. T. Teague*, fractured a finger; *J. W. Wray* suffered a sprained back; *Tom Cherry* cut his finger while at work; *T. C. Hurley* suffered a fractured toe; Mrs. *G. R. Finger* was a recent hospital patient and Peggy, daughter of J. F. Lutz, had an appendectomy. Also, Mrs. *L. D. Gaither*, Mrs. *D. R. Millsaps*, Mrs. *R. A. Harris*, Mrs. *J. T. Stikeleather* and Mrs. *J. H. Westmoreland* were surgical patients recently; *T. H. Cranfill's* daughter Vivian Ann and *Z. M. Speece's* son Keith Allen, were hospitalized; Randy, son of *M. C. Pharr*, injured an arm; *W. H. Tomlin's* son Timothy Kent was bitten by a dog and *J. E. Mayberry's* daughter Jo Ellen suffered a head injury.

CONGRATULATIONS to Mr. and Mrs. *J. K. Jarrett* of Newton, on the birth of a son, Jeffrey Todd.

OUR SYMPATHIES go out to John Bradburn of Iredell, who lost a brother; to *Pete F. Bray* of Catawba, whose wife died; to the family of retired employee *N. A. Kerley*, who died in May, and to the family of Area Foreman *I. B. Curlee* of Iredell County, who died June 18.

WE HATED to lose the only unmarried employee in District 2 Maintenance, *R. A. Bost* of Catawba County resigned in May.



Best wishes to these two Division 13 employees who have retired. Charlie Hensley, left, began work with the Highway Department in 1943. A native of Marshall, he is married to the former Sarah Ball and they have four children. Dove C. Boone, right, is a Madison County native, and also joined the Highway Department in 1943. He is married to the former Stella Fender and they have two children.

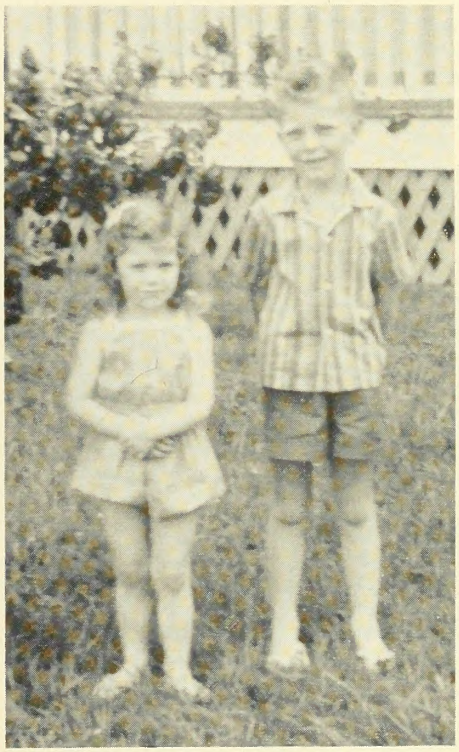
DIVISION THIRTEEN

By DAN TURNER

Division Correspondent

NEW OFFICERS of the Burke County unit of employees association are: *John Ollis*, chairman; *G. W. Abernathy*, vice chairman; *Gene Pruett*, secretary- treasurer and *J. F. Williams*, delegate at large.

A FINE RECORD has been compiled by *G. R. Smith*, who completed 40 years of service in June. Best wishes to Truck Driver *J. S. Proctor*, who retired in July after 20 years service, and to *H. R. Williams* and *F. D. Cobb*, Burke County employees who retired recently.



Presenting Cathy, 3, and Steven, 6, children of Woodrow Sharpe who works in District 2, Division 13.

VACATIONERS include Foreman *W. C. Reep*, who spent two weeks in Hollywood, Fla. with his daughter; *G. W. Abernathy* and family who were in Atlantic City for a vacation and the Lions International convention.

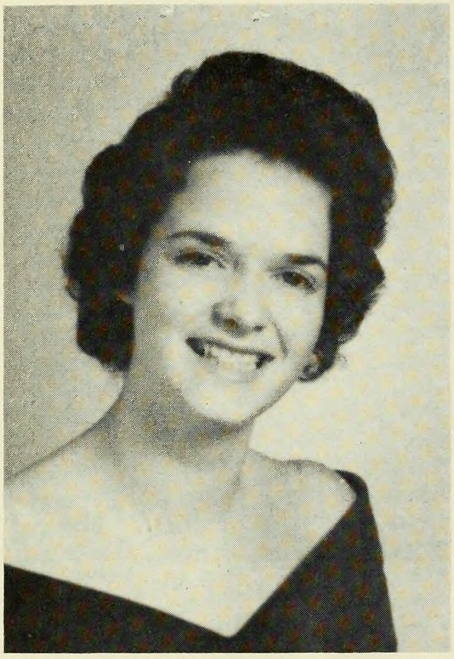
GET WELL WISHES go out to *W. J. Duckworth's* father, who has been hospitalized; to *A. A. Crawley*, who is in Grace Hospital; Mrs. Melba Bradley, *J. M. Williams, J. B. Young* and *A. L. Lytle.*

CONGRATULATIONS to Rachel Franklin, daughter of the *Roger Franklins*, who received a B. S. degree in home econo-

mics at Appalachian State Teachers College; and to *W. J. Duckworth's* son and daughter, graduates at Salem. Mrs. Franklin is spending a month with another daughter, Mrs. Pat Sullivan of Anchorage, Alaska.

FLORIDA was the vacation spot for the *F. S. Pennells*, who spent some time in Deland; the *Maurice Youngs* who went to Jacksonville and St. Augustine; the *Paul Robinsons* who spent a week at Ormond Beach; and the *George Mauneys*, who spent 10 days touring the entire Sunshine State. The *Andrew Ray* family decided to see some of the sights in our own back yard. They toured various points of interest in our own State.

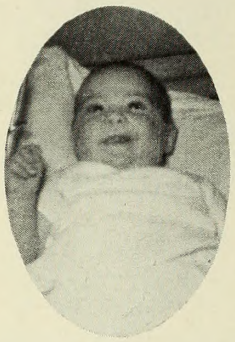
"TEMPORARY" transfers to the Marion Construction office include *C. M. Cabe*, *C. B. Naylor, Jr.*, and *W. E. Jenkins*, all of the Burnsville Construction Office.



Miss Patricia Ann Patterson, daughter of Mr. and Mrs. F. D. Patterson, became the bride of Engineering Aide Herman Carter Pounders on June 25. They are making their home in Asheville.

THE SICK LIST includes Mrs. Leata Compton, mother of Shop Foreman *M. A. Compton;* Motor Operator *J. B. Hollifield* of Madison County, and retired Maintenance Foreman *Ed Hunter* of Yancey County. It's good to see *A. E. Snelson* back after being out since February due to illness.

GOOD LUCK and many happy years of retirement to *Mrs. Louisa H. Verner*, inventory clerk at the Asheville Equipment Depot, who retired in July. She and her husband, Charles V. Verner, who is a retired Highway Engineer III live at 167 Pearson Drive, Asheville.



The pride and joy of the Washam household in Morganton is young Terri Lynn pictured here at age 2½ months. She's the daughter of the James C. Washams. James is a Highway Engineer I at Morganton.

DIVISION FOURTEEN

By D. V. RAXTER

Division Correspondent

TROUT FISHERMEN *W. V. Jenkins* of Graham County and *N. A. Waldroop* of Macon County, have had good luck, both catching native brown trout measuring 25 and 18 inches respectively.

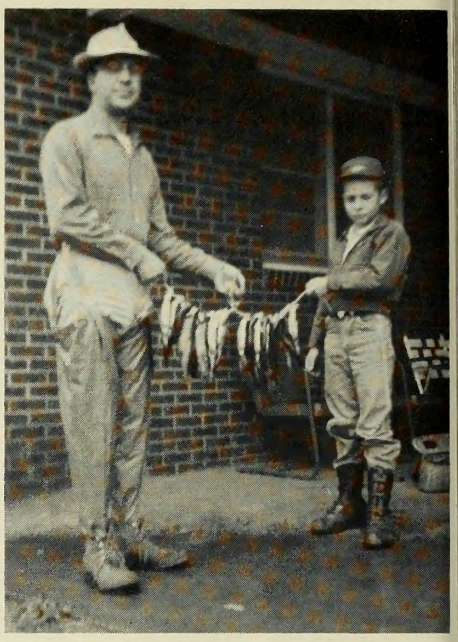
ITS BACK to college for clerk *T. Y. Galloway* of the District I office, who resigned in June to complete his education.

CONDOLENCES to the family of retired employee *Alfred B. Zachary*, who died recently.

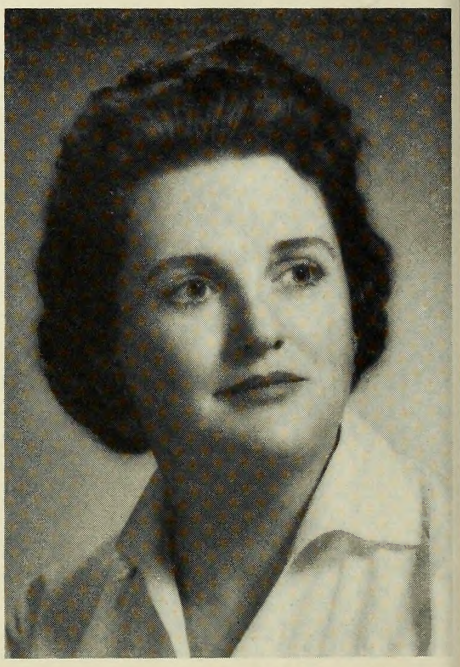
ON THE MEND following surgery is Mrs. Shirley Whitmire, wife of Foreman *Howard Whitmire* of Transylvania County. *R. A. Cash*, Road Maintenance Supervisor, is back on the job after his recuperation from surgery. Get well wishes are extended to *W. T. Huscusson*, *Guy Hill*, Mrs. *B. R. Walters*, Mrs. *C. E. Slaughter* and the mother of Maintenance Foreman *W. V. Jenkins*.



Shirley Jean Becker, daughter of Mr. and Mrs. Johnnie Becker of Division 14, is an honor graduate of Swain High School and a student at Berea College in Kentucky.



D. V. "Don" Raxter and his 9 year old Hugh display a day's catch of brook trout, taken while fishing in the Sherwood Fish and Game Reserve. Don is Div. 14 Office Engineer at Sylva, and also Division correspondent for ROADWAYS.



Mrs. Ernest Wolfe, Jr., daughter of Ed Coley of Division 7, received the Greensboro Association of Insurance Women's John W. Trimble Award as the Insurance Woman of the Year. She is the current holder of the Florence B. Isley trophy as N. C. Insurance Woman of the Year. She and her husband and three children live at 3718 Frazier Road, Greensboro.

(Continued from page 6)

a Baptist, a member of the Lions Club and the East Carolina Engineers Club.

Haislip, a native of Robersonville, has worked for the Highway Department since 1946. He received his education at Bethel High School and Duke University and studied engineering through International Correspondence School courses. He served in the Navy during World War II.



Haislip

He is married to the former Sadie Leigh Patrick and they have two daughters. Haislip is a member of the American Legion, East Carolina Engineers Club, and is active in the work of the First Baptist Church in Washington.

In the Location Department, H. Boyce Midgette succeeds George A. McKinley as Area Locating Engineer.

A native of Buxton, Midgette joined the Highway Department in 1950. He is a graduate of Buxton High School, Oak Ridge Military Institute and State College. He served in the Coast Guard during World War II. Midgette, who is married to the former Shirley May Williams, is the father of two sons. They make their home in Garner.



Midgette

His successor as Administrative Assistant in the Location Department is Frank E. Daino. A New Jersey native, Daino has worked for the Highway Department since 1953. Prior to this time, he served as Assistant City Engineer in Wilson for about six years. He is a member of the Catholic Church, the Moose Club, VFW, American Legion and the N. C. Society of Engineers. He is married to the former Marion Ruth Bazemore and they have one daughter.

Daino's successor as Data Processing and Mapping Engineer is William E. Grady, a native of Wilson, who has worked for the Highway Department since 1951. Grady was educated in the Wilson schools and studied engineering through correspondence courses. He is married to the former Mary Angela Griffin.

McKinley has retired after 35 years with the Highway Department. A native of Pennsylvania, he joined the Department in 1926 as a transitman, later serving as junior party chief, senior party chief and senior locating engineer. He graduated from Alleghany College in Pennsylvania, with a degree in civil engineering. He is a Presbyterian, a member of the N. C. Society of Engineers and the Raleigh Engineers Club. McKinley is married to the former Margaret Virginia Cheek and they make their home in Raleigh.

Others who are retiring this year include: J. L. Collier, J. H. Jones, P. Mulder, G. W. Kittrell, R. Ball, E. O. Cowan, M. M. Smith, W. P. Pearce, C. F. Holland, J. H. Shaw, D. S. Pettigrew, A. R. Pierce, A. A. Jones, C. E. Glasgow, H. L. Norris, W. C. Kesler, C. D. Lookabill, O. G. McGlamrock, W. L. Reavis, J. B. Pridgen, E. L. Winfield, D. K. Lowder, E. C. Greene, C. P. Swift, F. H. Flinchum, D. C. Boone, J. S. Proctor, C. K. McDaniel, H. R. Williams, W. J. Freeman, A. Parker, M. T. Askea, R. L. Bailey, F. E. Cobb, J. Fields, O. Harrell, M. L. Hornbuckle, J. L. Matthews, J. H. Page, F. Poe, L. H. Verner, Vera Graham, M. D. Freeman, and Helen J. Brothers.

(Continued from page 3)

Bill Horner—Randolph, Chatham, Lee and Harnett.

Elsie Webb—Montgomery, Moore, Hoke, Richmond and Scotland.

Jimmy Glenn — Stokes, Forsyth, Davie, Davidson and Rowan.

Paul Younts — Cabarrus, Stanly, Mecklenburg, Union and Anson.

Watson Brame—Ashe, Alleghany, Wilkes, Surry and Yadkin.

Murray Tate—Alexander, Iredell, Catawba and Lincoln.

Clint Newton—Henderson, Polk, Rutherford, Cleveland and Gaston.

Jack Kirksey—Watauga, Caldwell, Burke, Avery, Mitchell and McDowell.

Yates Bennett—Yancey, Madison, Buncombe and Haywood.

Ted Jordan—Swain, Jackson, Transylvania, Macon, Graham, Cherokee and Clay.

Vice Chairman Named; Babcock, Dixon, Roney Get Appointments

During a recent orientation session in Raleigh, the new 19-member State Highway Commission named Clifton Benson of Raleigh Vice Chairman of the roads body, and re-appointed Highway Director W. F. Babcock and Controller Ervin Dixon to new four-year terms of office. The new Commission also named Ben Roney of Rocky Mount Director of Secondary Roads.

Appointment of Babcock, Dixon and Roney in administrative posts carried official sanction of Governor Sanford, whose recommendations were read to the Commissioners.

A native of Watertown, Mass., Babcock was appointed Highway Director in July 1957. Prior to that time, he was professor of civil engineering at State College, where he was in charge of undergraduate and graduate work in Highway and Transportation Engineering.

A Rocky Mount oil distributor, Roney served as administrative assistant to Governor Kerr Scott.

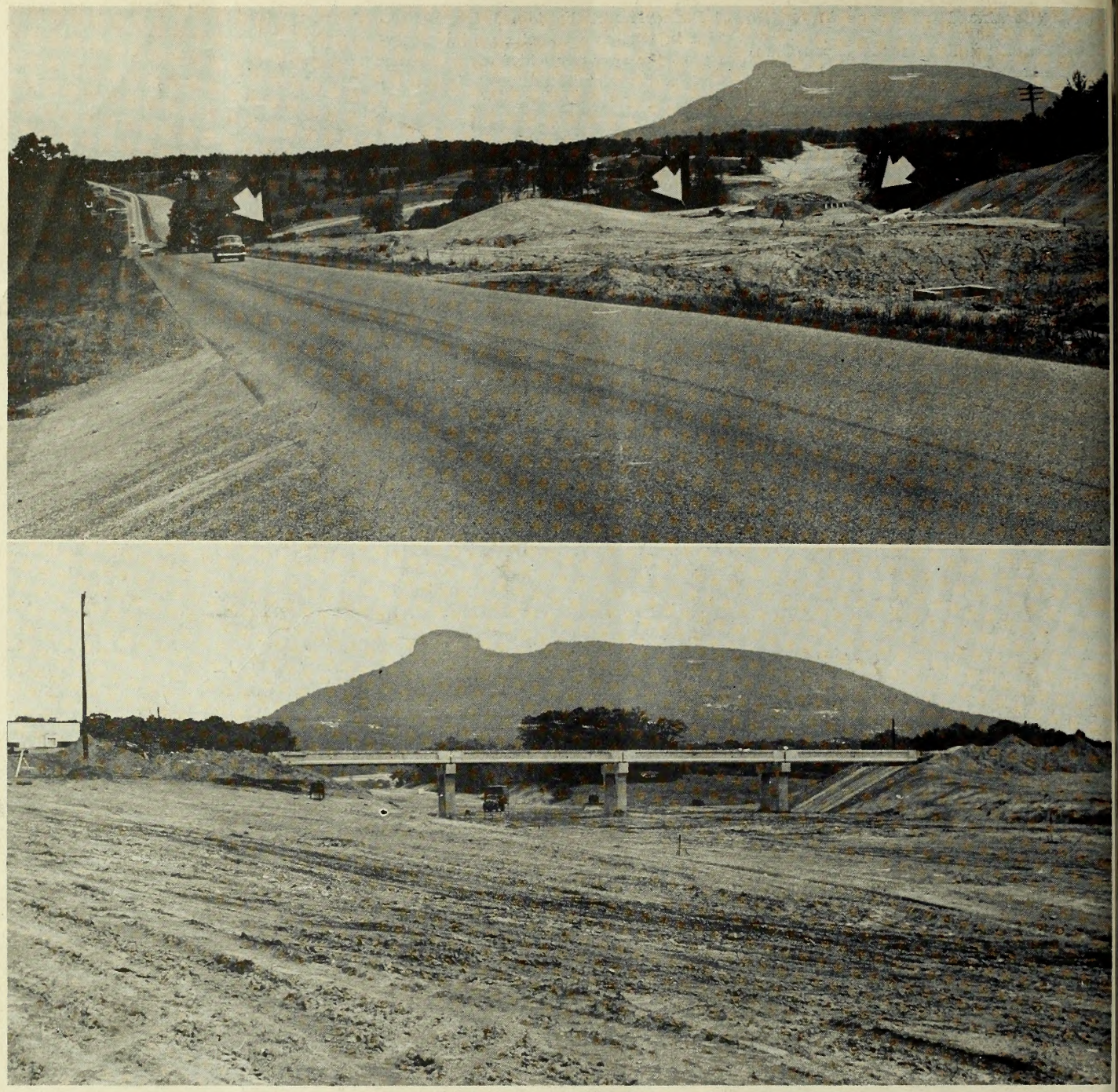
Dixon was re-appointed to a second four-year term as chief financial officer. A Robersonville native, he graduated from the University of North Carolina where he was a member of Phi Beta Kappa. He worked as an accountant and controller in Texas before returning to North Carolina in 1956, when he was employed as the highway budget analyst for the State Budget Bureau, and assisted in setting up the Highway Department's modern accounting system.

Parkway 25 Years Old

The Blue Ridge Parkway, America's most scenic highway, celebrated its 25th birthday in June.

North Carolina's section of the Parkway is open from the state line to Asheville, except for 5½ miles across Grandfather Mountain, west of Blowing Rock, where the right-of-way has not been acquired. Beyond Asheville, the 11-mile Wagon Road Gap-Beech Gap section is open; also the 25-mile stretch form Balsam Gap (US 19A-23) to Great Smoky Mountain National Park.

Between Balsam Gap and Soco Gap (US 19) the Parkway soars to a 4-State view at Waterrock Knob, Mile 451.2, elevation 5,820 feet. This 13-mile section was opened for travel in the late fall of 1960. There is an additional 30 miles of the Parkway in various construction stages west of Asheville, but this is not scheduled for opening during the current travel season.



Progress is reported good on the construction of this new section of US 52, from a point 2 miles northwest of Pilot Mountain, to the Forsyth County line, through portions of Stokes and Surry Counties. Mt. Airy Grading Co., has the roadway contract at a cost of $1,298,728.20, and the structure contract is held by James T. Triplett Co., of Chester, S. C., whose bid was $1,141,804.11. Arrows in the top picture show the connections between the new road and the existing road, which is shown in the foreground. (Photos by Gene Whitman of The WINSTON-SALEM SENTINEL.)

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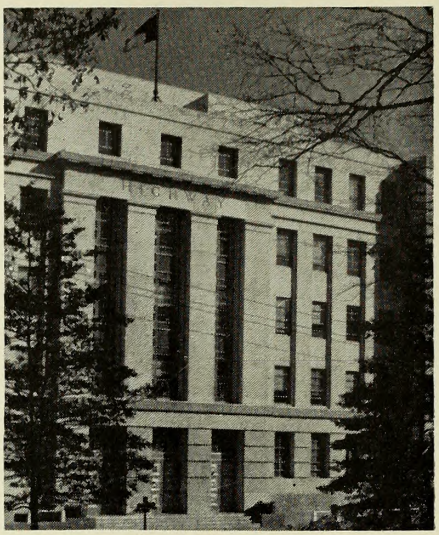
SEPTEMBER-OCTOBER 1961

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VOLUME XI
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In Memoriam

H. CLOYD PHILPOTT

April 6, 1909 – August 19, 1961

A GREAT NORTH CAROLINIAN

A GREAT AMERICAN

A CHRISTIAN GENTLEMAN

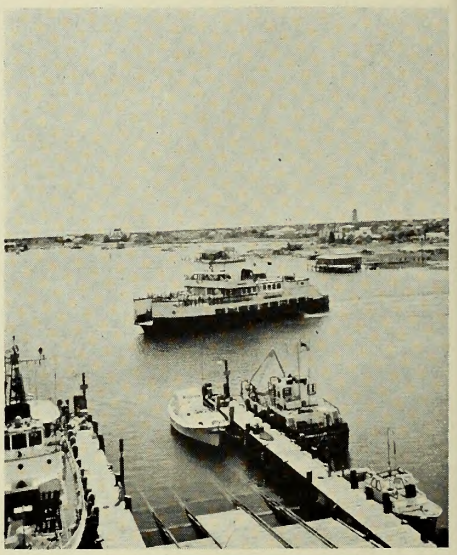
Alligator River Bridge Nears Completion

5 Months Ahead of Schedule

Latest report from the contractors indicate the Alligator River Bridge (formally tabbed the Lindsay Warren Bridge) will be ready for traffic around the first of the year. . . some five months ahead of schedule. When opened the structure will eliminate costly, time consuming ferry service across the river. In addition, it will become the first direct roadway link between the counties of Dare and Tyrell.

As to bridge nears completion, the six-county Southern Albemarle Association, meeting in Columbia, began to set plans for a formal dedication and opening of the facility. Robert L. Cowan of Williamston, President of the group named a committee to draw up resolutions for the opening to be presented to the regular fall meeting. Counties included in the association are Dare, Hyde, Tyrrell, Washington, Martin and Beaufort.

(Continued On Page 1)

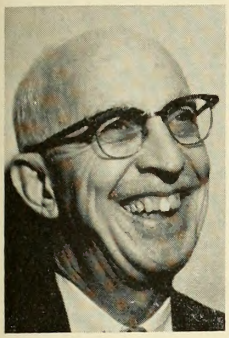


Ferry "Sea Level" completes its channel turn and heads for the dock to bring Highway Commissioners and engineers to Ocracoke. Private cars met them and carried them north to Hatteras Inlet to continue the tour.

The Cover

A ferry moves into shore near the completed section of the Alligator River Bridge. (See related stories on page 2.)

U. S. Bureau of Public Roads



Bremer

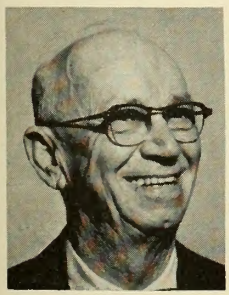
Planning Engineer Transfers

Henry Bremer, long-time programming and planning engineer for the Bureau of Public Roads in the North Carolina division will be leaving his post October 1 to take over similar duties in the Florida division of the Bureau. Bremer came to Raleigh with the Bureau in 1946 and has served continuously in the programming and planning phase of highway work. He is recognized as an authority in this field not only in this region but in the nation.

Born in Wilmington and educated in the public schools there, he attended North Carolina State College, graduating with a civil engineering degree in 1925. For a short time after his college career, Bremer worked for the Highway Commission as a roadway draftsmen.

He also has worked for the U. S. Corps of Army Engineers and the U.S. Bureau of Aeronautics. Bremer first went with the Bureau of Public Roads in 1935 working in South Carolina as well as in North Carolina prior to World War II.

He will be stationed at the U.S. Bureau of Public Roads office in Tallahasse. Coming to North Carolina to replace Bremer will be David A. Merchant of Washington, D. C. who has worked in the Bureau offices there as design engineer in the urban highway department. Division Engineer Jim Lacy reports that Merchant will report to the Raleigh offices of the Bureau around the middle of September.



Jerome

On September 1, Fred D. Jerome retired after 26 years with the Bureau of Public Roads. Prior to joining the Bureau in 1935, Jerome was employed by the North Carolina State Highway Commission. Jerome was honored August 30 at a Retirement Dinner, at which time James D. Lacy, Division Engineer of the U. S. Bureau of Public Roads in North Carolina, presented him with a letter from R. S. Anderson, Regional Engineer, and also a certificate signed by Secretary of Commerce Hodges and Rex M. Whitton, Federal Highway Administrator.

The office force presented Jerome with a set of hand power equipment for his home workshop.

MINIMUM SPEED LAWS IN EFFECT

Slow drivers can often be dangerous traffic hazards on the State's main highways.

A minimum speed law aimed at preventing these "poke-alongs" was enacted by the last General Assembly to be effective when signs are posted. This law provides for a minimum speed of 45 mph on 60 mph sections of highway and for a minimum speed of 40 mph on sections where the maximum speed is 55 mph.

According to R. A. Burch, Traffic Engineer for the State Highway Commission, these minimum speed signs will be posted on all sections of the Interstate System. Also, on an experimental basis, minimum speed signs will be posted on US 1, US 301, US 70 and US 64 for their entire distance across the State.

The signs to be placed on the Interstate System will be made of Scotchlite to conform with the existing primary signs. In all cases where the signs will be posted, it has been proposed that the panel indicating a minimum speed law be attached underneath the existing speed signs.

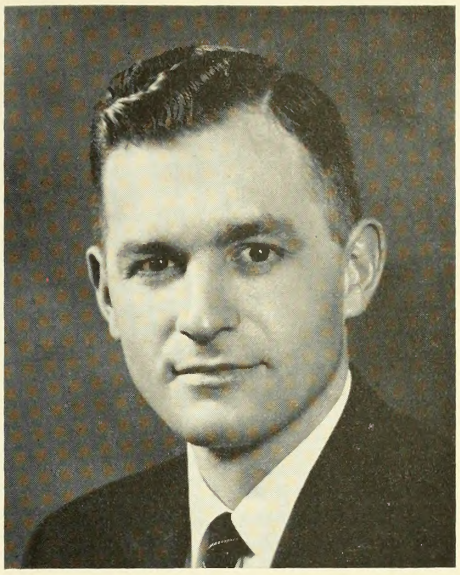
Alligator River Bridge

(Continued From Inside Front Cover)

Bridge contractor T. A. Loving of Goldsboro has virtually completed the western portion of the bridge out to the draw span and, as ROADWAYS goes to press, work on the eastern portion is being pushed. Loving's bid was $2,848,758. Approach work and hydraulic fill was handled by W. J. McLamb and Son of shallotte at a bid price of $110,947.

For the first time in North Carolina history the bridge contractor set up his own plant for making prestressed concrete pilings, thus preventing long hauls and expediting the construction.

It is anticipated that the ferry boats now plying the Alligator River will be transferred to another eastern spot, possibly Emerald Isle where ferry service has been approved in principle by the State Highway Commission.



Roger R. Jackson, Jr.

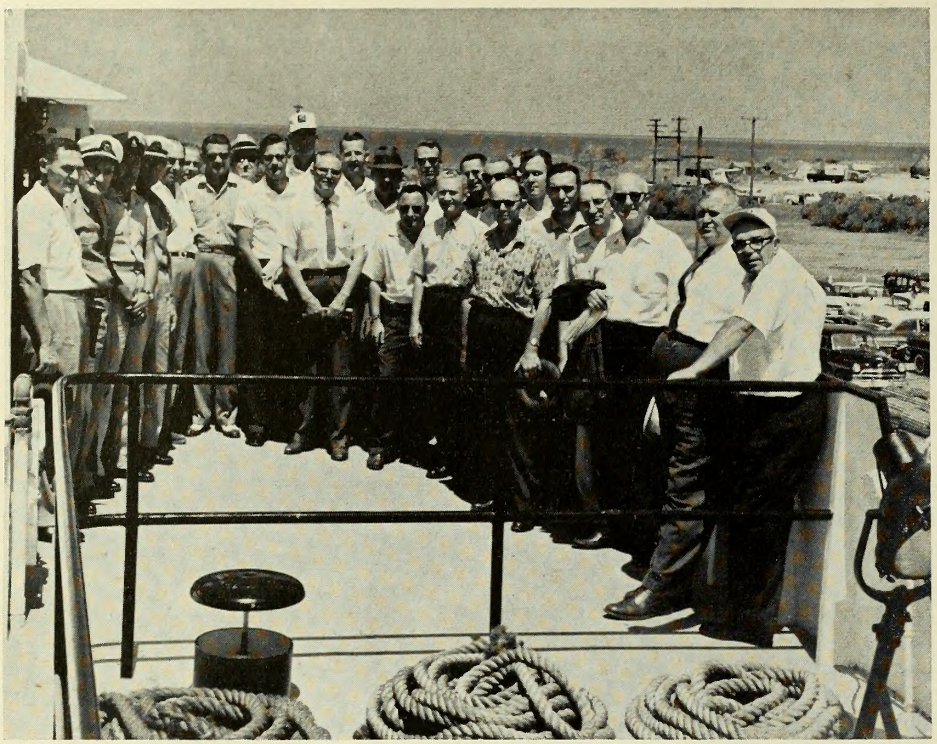
Public Relations Head Assumes Duties Sept. 1

Roger R. Jackson Jr., newly appointed Public Relations Officer for the State Highway Commission recently assumed responsibility of the Commission's overall public relations program. He has expressed his intentions of carrying out the wishes of the Governor and the Highway Commission that the public be fully informed on highway matters.

The son of Roger and Kathleen (Murphy), Jackson attended public schools in Jackson, High Point and Harrellsville. He graduated from Wake Forest College in 1951 with a B. A. degree. While in college, Jackson was president of the Little Theatre, member of the Presidents Club, Alpha Psi Omega, Philomothesian Club, and announcer for Radio Station WFDD. After two years in the Navy, he returned to Harrellsville to teach school, and since 1953 was cashier of the Bank of Harrellsville.

During the past eight years Jackson served as Mayor of the town of Harrellsville, President of the Young Democrats Club, Vice President of the North Carolina Young Democrats Club, Permanent Convention Chairman in 1959, and for two sessions in the North Carolina General Assembly, 1959 and 1961.

His wife is the former Alma Barber of Clarkton, N. C., and they have three children, Maurice, 6, Eric, 4 and Emily, 1.



Practically the entire State Highway Commission made the trip along with members of the highway staff and engineering personnel from Raleigh and from the field. They were given a complete tour of the "Sea Level" while enroute on the four-hour trip.

Tour Signifies Increased Interest In Coastal Progress

The 19 member State Highway Commission has completed the first of what promises to be a continuing swing through North Carolina to look at road problems first hand.

Last month the roads body journeyed to Morehead City to begin a junket that took them the entire length of the Outer Banks to inspect road, bridge and ferry problems that continue to plague the group what with the continuing buildup of traffic to and from scenic coastal points.

Meeting first at Morehead City as the guests of Commissioner D. G. Bell, the commission studied proposals for a new US 70 bridge linking the towns of Beaufort and Morehead City. The controversial bridge has been under discussion for over three years and has been the subject of three formal public hearings. Original proposal of the State Highway Commission was to construct a new bridge just north of the existing and outmoded structure and to provide it with a 65 foot vertical clearance. The bridge would also be designed for possible conversion to an ocean-going drawbridge at some later date if port development in the Newport River basin warranted.

The original proposal evoked both praise and criticism from Carteret citizens some of whom saw the construction of the bridge close to the old span as a treat to future port development potential. Opponents argued that the new structure should be built farther north to tie in with an eventual northern bypass of Morehead City and to leave the lower Newport River free for dock and port facility construction.

On its recent tour the Commission took no position but toured the area extensively by land and water to examine the merits of each proposition. A final decision on the matter is expected shortly.

The same day commissioners toured Atlantic Beach to study requests for a State-operated ferry service across Bogue Sound from the Carteret mainland to Emerald Isle. The former Highway Commission approved installation of the service at least in principle but no steps have as yet been taken to implement the decision.

Back in Raleigh following their tour the Highway Commission reaffirmed the earlier position that ferry service is needed but they delayed making any decision regarding free versus toll ferry service. Under the existing policy of the Commission which provides for free ferry service if such service is the only access but toll service if other access is available, the Emerald Isle service would be toll. However, several Commissioners indicated they would like to review the entire ferry policy of the commission before determining whether the Emerald Isle run would operate on a fee or toll basis.

Beginning the second day of their three day tour, Commissioners boarded the ferry boat "Sea Level" for the four hour trip from Atlantic to Ocracoke. Careful to leave all cars behind, the Commissioners were given the cook's tour of the boat and were greeted on the Ocracoke side by a group of islanders anxious to confer with the road's body on dock, ferry and road needs. At a subsequent meeting of the Commission in Raleigh a $3000.00 rest area facility was approved for the north end of Ocracoke near the Hatteras Inlet dock.

One of the highlights of the trip was inspection of Oregon Inlet where a Commission-approved bridge will one day span inlet waters between Nags Head and Hatteras. Previously the Highway Commission had approved the bridge construction and allocated $7,500 for initial location studies. At its late August meeting the Commission heard Chairman Merrill Evans say that construction of a bridge seems to be the only answer to traffic problems at the crossing. Ferry boats have been unable to carry the loads in and out of the National Seashore Park area, especially during summer months and reports have it that cars and trucks have been piled up for three to five hours waiting for ferry space.

Even while Commissioners were touring the Outer Banks, N. C. Congressman Herbert Bonner was readying a bill calling for the Department of Interior to defray half the State's cost of constructing the bridge. Bonner's point is that much of the traffic now being handled by the State is destined for the National Seashore Park administered by the National Park Service under Interior.

Introduction of Bonner's bill brought favorable comment from the Commission since, if passed, it could cut North Carolina's cost of the Oregon Inlet Bridge from two to one million dollars. Total cost of the structure has been estimated at some four millions but it would be built on a 50-50 participating basis with the Bureau of Public Roads sharing half the cost.

Following their tour of Oregon Inlet, Commissioners crossed the Alligator River to observe first hand the rapid progress being made on the new structure (see front cover picture and story).

The Commission is contemplating tours similar to their coastal junket in the near future. First of these will probably come in October with a swing through the western part of the State. Here, requests have been filed with the Commission for major improvements to mountainous and curvy US 64 in the vicinity of Highlands and westward to Murphy.

Engineering Terms Their Origin

According to tradition, the length of the arm of King Henry The First was the legal English yard. Body measurements were employed to evaluate short lengths in terms of digits, palms, spans, feet and cubits. From the earliest times the basic standard of length was the height of the "ideal man" (72 inches.)

Land measurements were originally based on the amount of seed required to plant a given area. The word "acre" was derived from the Latin word "ager" which meant land under cultivation, based on another word which meant "to drive". Hence, originally a measure of land of variable size plowed by a yoke of oxen in one day.

Listed below are a few of the origins of our present day engineering terms.

1 digit—the breadth of the middle finger.

1 nail—the breadth of the thumb nail equal to one digit.

1 palm—A hand breadth.

1 span—the distance between the tips of the extended thumb and little finger.

1 foot—the length of the foot from the back of the heel to the tip of the big toe.

1 cubit—the length of the bent forearm from the point of the elbow to the tip of the middle finger.

1 double pace—a single step measured from the back of one heel to the back of the same heel when it next touches the ground.

1 fathom—the distance between the middle finger tips of the two outstretched arms.

1 pace—A single step measured from the back of one heel to the back of the other.



Graveyard of mutilated highway signs is small example of destruction occuring throughout North Carolina each year. (Photo Courtesy of Harold Powell)

Vandalism To Signs Costs State $100,000 Annually

The sharp clang of a rock smashing into a metal sign—the zing of a well-aimed bullet that finds its mark—the would-be artist who has found that a 3 in 35 can be changed very simply to an 8. These are some of the problems facing traffic engineers and sign supervisors in what has been termed an annual $100,000 disgrace in North Carolina, according to Highway Department officials.

R. A. Burch, State Traffic Engineer estimates that each year $100,000 is spent to replace roadside signs which have suffered severe damage at the hands of some unthinking youngster or older person who regards highway markers as nothing more than an object for target practice.

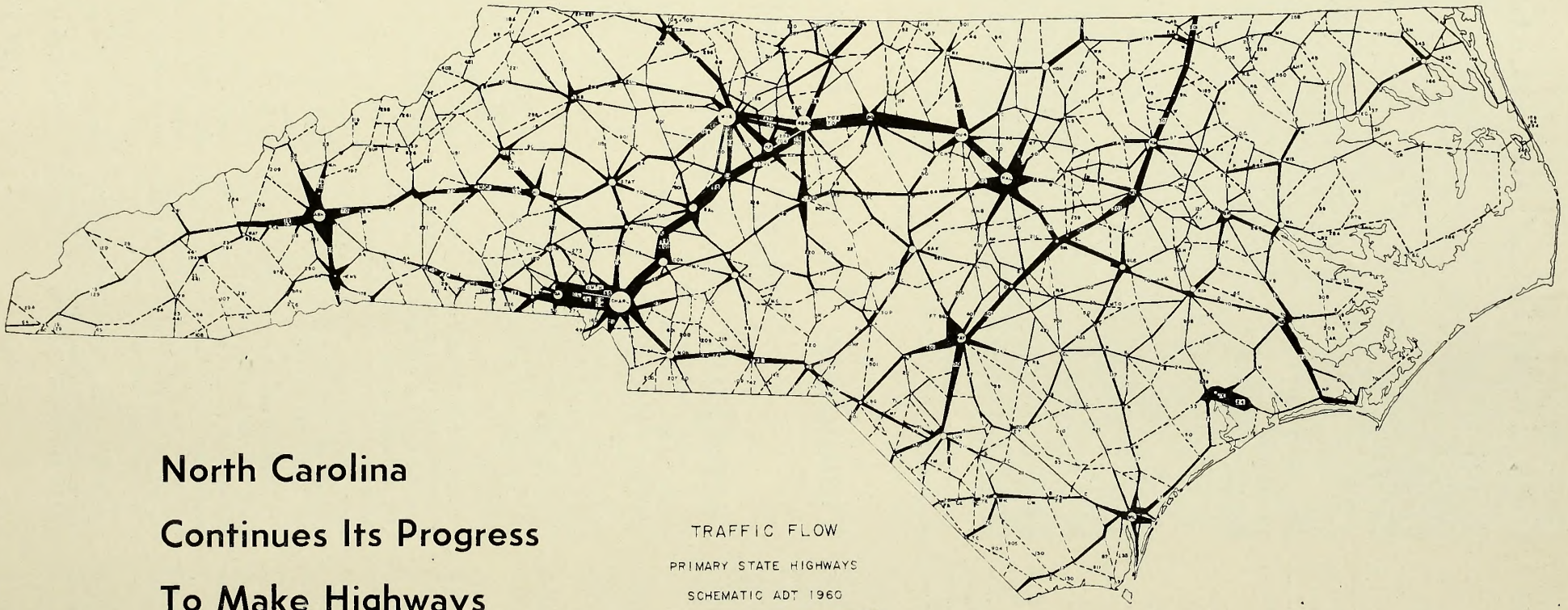
If such useless waste could be eliminated the same amount of money would hardsurface more than five miles of secondary roads each year, replace one or more outmoded secondary road bridges or construct about a quarter of a mile of new four-laning.

Annually the various sign departments estimate they replace about a quarter of a million highway signs, 20% of which have been damaged beyond repair by rocks, bullets or bottles or by bending, stealing, breaking or painting.

Outright theft of signs has also been a problem over the years ever since some high school or college student thought a highway sign would look better on the wall of his room than out on the road. Happily, according to Burch and others, this expression of adolescence seems to be on the wane but has by no means disappeared. Sometimes theft of signs can take on enormous proportions.

Not long ago field forces of the Highway Department came on what seemed to be a whole truckload of highway signs in a remote, wooded area near White Lake. Carelessly thrown about on the ground or tacked to nearby trees were roadside markers, not only from North Carolina but from Virginia and South Carolina as well. The culprit or culprits had a yen for travel and collected trophies from points as far away as a hundred miles and toted them back to this seculded "graveyard" where they might be enjoyed at leisure.

(Continued on Inside Back Cover)



North Carolina Continues Its Progress To Make Highways "Adequate For Traffic"

TRAFFIC FLOW

PRIMARY STATE HIGHWAYS

SCHEMATIC ADT 1960

UP TO 1000 — 1000-5000 — 5000 10,000 20,000 30,000

20 MILES

MAP SCALE

NORTH CAROLINA STATE HIGHWAY COMMISSION

UNITED STATES BUREAU OF PUBLIC ROADS

NORTH CAROLINA TRAFFIC CHARACTERISTICS

By James S. Burch

State Traffic Engineer

The ultimate objective of almost all the work done by the State Highway Department could be stated in a single short phrase—To provide adequate highway, street, and road facilities for the movement of traffic, and to maintain those facilities. The key words considered here are "**adequate for traffic.**"

The average citizen seldom thinks of traffic except when he is delayed or bothered by it. When he does consider it, his mind moves into the reason for trips, and to him a trip is the colorful, dramatic, long pleasure trip such as to Florida, Washington, New Orleans, Texas, or Denver. His next thought is likely to be that such trips by other people account for his occasional traffic delay, that these trips should be bypassed around the congested area he has in mind, or that the whole route should be converted into a four-lane expressway.

Having followed this line of thinking, he is now in a position to ask the Highway Department to provide such an improvement at some point, usually in his home area. He has thought it out, and is sure of his position. The cost involved seldom receives even scant consideration.

The trouble is that—lacking the traffic facts—he has likely followed a false line of reasoning, and arrived at a decision which may well be questionable.

Some of the basic traffic facts, as we have found them after twenty years of continuous and intensive study in North Carolina are as follows:

Traffic is the composite result of almost all modern physical activity. Practically all our outdoor time is spent in a car. All goods and products move by truck at one time or another. Therefore, **every** activity is reflected in the "reasons" for traffic, with very few exceptions. This activity may involve work, home, hauling, recreation, shopping, school, doctor, movies, college, local deliveries, farm activity, visits, business—everything. The long pleasure trip is relatively rare.

Traffic is local in nature. The traffic stream seldom includes more than 10 per cent of long-trip vehicles, usually far less. The average trip is usually only a few miles in length. The vast majority of vehicles encountered are on trips starting or ending at "home," on "business," or at "work.' Therefore, homes, businesses, and working places are the prime traffic generators.

It naturally follows that where there are large clusters of homes and working places nearby, the traffic is high; and conversely in their absence, it is low. This is the cardinal nature of traffic generation. In and near cities, the traffic increases greatly; leaving the city, it diminishes very rapidly. Within the city where there are many street combinations, the traffic tends to disperse, and—being highly mobile—shifts very quickly from one set of streets to another, constantly searching for the quickest travel time street combinations. However, in spite of this dispersion, the street volumes on arterial city streets are likely to be much higher than outside the city, because of the great traffic generation in the urban community, and the short length of their trips.

Outside the cities, high traffic volumes are found where the nearby population density is high, and where industrial activity is great. The highest rural volumes of all are found on a highway which joins two nearby cities. Because the traffic "magnetism" of one city is added to that of the other, the "traffic attraction" is great. Conversely, where cities are remote from each other, their traffic attraction is low, even though the cities be sizeable.

As an example, we may consider Route 49-64 which joins Raleigh, the State's Capitol city, with Charlotte, the State's largest city. The casual observer would assume that there is great mutual traffic attraction between the two cities. His belief would be supported by the fact that, on this route at a point just east of Asheboro, he could actually count over 4,000 vehicles passing on the average 24-hour day. What he does not realize is that only about 200, or less than 5 per cent of the observed vehicles are on Raleigh—Charlotte (or reverse) trips. The reason is simply that the cities are so remote from each other, that their mutual traffic attraction is very low. The high volumes near Asheboro are made up mainly of rather short, overlapping local trips.

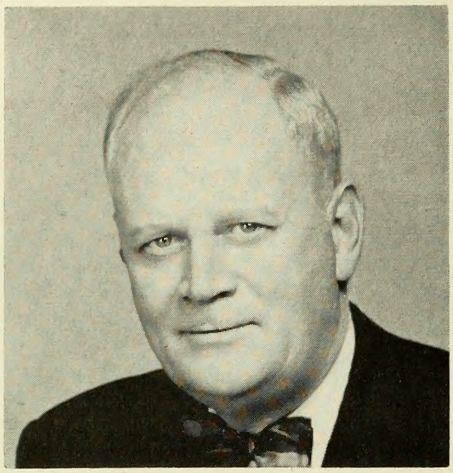
As another example, we may take two much smaller cities—High Point and Thomasville. The combined population of the two is less than that of Raleigh, the smaller of the Charlotte-Raleigh pair discussed above. Yet, the traffic attraction between these two small cities is well over 6,000 per day, or over thirty times the attraction between Charlotte and Raleigh. The reason is that these small cities are only a few miles apart, and the traffic interaction between them is therefore great.

This principle accounts for the high traffic volumes in some parts of the State, and low volumes in others, even on the same route. It also explains why up to ten traffic "lanes" are needed to serve highway movements in some areas, and as few as two lanes adequately serve highway movements in others. The need is a function of the proximity of the total population: and to the distance between their groupings.

Another prevalent belief is that a bypass is the standard and sure "solution" to all city and town traffic troubles. This belief undoubtedly stems from the fact that the long-trip driver searches for bypasses and benefits greatly from using them. The point he does not realize is that, as a long-trip driver, he is one of a very small minority of travelers. The vast majority want to go into the central city, or into parts of the city near its core, and they—the majority—will not use the bypass, because it is of no value to them. Traffic cannot be lead away from its objective, nor deflected very far from its line of desire.

Still another idea is that the major improvement of a highway will "draw" or generate traffic. This has been found to be largely untrue. The fact is that highways do not, within themselves, create traffic nor wealth. They are necessary to serve both, but the traffic generation itself is due to traffic demand created by nearby economic or sociological growth. It the demand is not existent or potential, the improvement will seldom increase total traffic movement. Usually, the best it can do is to influence traffic to leave one route and transfer to another. And this influence is limited generally to a single traffic "corridor" of limited width. Traffic will not transfer very far from its straight desire path even for a better highway.

(Continued on Inside Back Cover)



Tarvia Jones

NATIONAL SAFETY MEMBER

On August 21, George McCormack from the Bureau of Labor Statistics in Washington, D. C. consulted with Safety Engineer Tarvia Jones in reference to serving as a member of a national safety committee.

This committee, composed of nine men throughout the United States, is designated to study and discuss the accidents concerning highway construction — causes, how often they occur, and pin point most frequently caused accidents. Also, the committee will act in an advisory capacity and will later launch a statistical study envolving problems encountered.

Those men who have consented to serve on the committee are: Tarvia Jones, Engineer of Safety, N. C. State Highway Commission; Homer Clark, Federal Highways, Bureau of Public Roads; Bob Jenkins of the Corps of Engineers; George Brown, Deputy Director of Labor Standards; Mr. Schumhul of the Association of Contractors (associated with the National Safety Council); and Hunter Werton. Professor Dunlop of Harvard, associated with the Joint Industries Conference will serve in an advisory capacity.

The first meeting of the committee will be this month in Washington, D. C.

"They've stolen the steering wheel, the brake pedal, the accelerator, the clutch pedal and the dashboard," he complained.

A police sergeant said he would investigate. Then the phone rang again.

Don't bother," said the voice—this time with a hiccup. "I got into the back seat by mistake."

MAINTENANCE

"To Provide, Preserve, Maintain"

By Layton Gunter
State Maintenance Engineer

What is the standard of maintenance in North Carolina? What should it be? What do we mean by a uniform level of maintenance throughout the State?

First of all, the pattern of maintenance is somewhat determined in the actual construction of the facility as, generally, the maintenance is preservation after construction. The challenge not only applies to maintenance men but designers, constructors and administrators as well. To take a hard look at the terms and their import, what is meant by a "standard"? Someone has said a "definite level of excellence viewed as a prescribed object of endeavor or as the measure of what is adequate for some purpose". In the case of highway maintenance this definition might be appropriate: "The preservation and upkeep of a highway including all of its elements, in as nearly as practicable its original as-constructed condition or its subsequently improved condition."

The question then may arise: What is the maintenance performance necessary to accomplish the concept? Top level administrators need to know what levels of performance are needed and plan in order to measure adequacy of the maintenance program. Maintenance needs to establish these levels as a basis for planning its manpower, materials, equipment and operations. Since these are "levels" they also are "standards". We then come to the question: How much do we provide in any stated interval of time, or how frequently do we maintain?

Built-in quality begins to decline the day a completed project goes into operation. A determination must be made as to how often and how much maintenance will be expended to restore that quality. This is influenced by design standards in terms of adequacy for traffic. Costly maintenance may or may not be involved. Adequate pavement design, adequate drainage and, of course, several other factors are involved. A lower standard of design necessitates a higher level of maintenance in the sense of more frequent maintenance.

Another important determination so vital in the standard of maintenance: How should a concrete pavement be patched; when should a slab be replaced, mudjacked or subsealed; how should high grade bituminous pavement be repaired—how low grade; drainage and shoulders; how often and how should shoulders and roadside be mowed or right of way cut; herbicides used. Mowing has come to be an expensive operation. We are literally in the mowing business in terms of vast acreages. Maintenance of unpaved roads—level of construction and maintenance—adequate widths, surfacing material, drainage, etc. When and how frequent should these roads be machined, etc.

Another phase of operation that needs critical scrutiny; is snow and ice control. Should we plan beyond our now existing standard in this operation? Should we provide more forces and equipment, possibly some of which would be hired from contractors, etc., for the emergency? Should we use more additives in an effort to clear pavement of ice more completely on trunk line arteries during these emergencies, as well as spot covering, hills, superelevated curves, intersections, etc.?

Standardization in maintenance operations is a must, both in terms of a uniform level of service and in the cost involved. It is reasonable that citizens and taxpayers across the State do expect a uniform level of service; that is, the same quality of service state-wide. Highway employees are dedicated and challenged to this task. The same dedication and challenge of employees is required in maintaining high standards in quality of work performed.

At the AASHO Annual Meeting in Detroit, Michigan, during November 1960, I had the privilege of sharing in a subcommittee session with Maintenance Engineers from twenty-nine other states, and other highway representatives, in a discussion on the matter of Maintenance Standards. This appears to be a very significant matter on a national basis. The AASHO Committee on Maintenance and Equipment has an active sub-committee studying the general status and needs involved on a national basis.

The trend in cost of maintenance, as generally realized in highway circles, has for several years been on the upswing. At the present time approximately one million dollars per week is expended

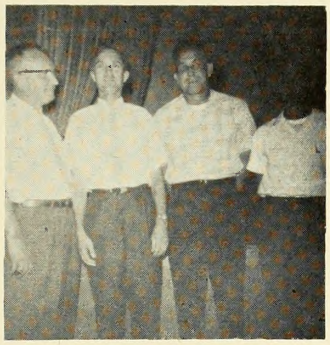
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N. C. S. H. P. E. A. Association News

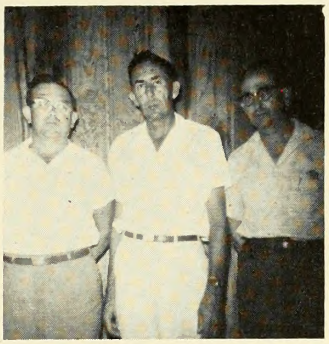
VOLUME 10—NUMBER 11 SEPTEMBER, 1961

Unit Officers

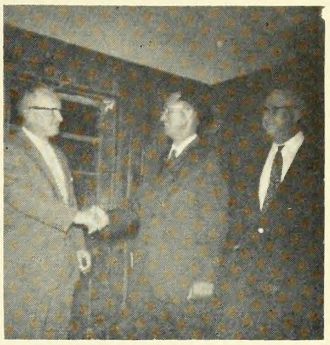
1962-1963



#1—Pres. Turner installs Chairman Roy West; D. E. Snow, Vice Chairman; Earl Moore, Secretary.



#2—G. A. Taylor, Jr., Chairman; R. A. Merritt, Vice Chairman; E. D. Credle, Secretary.



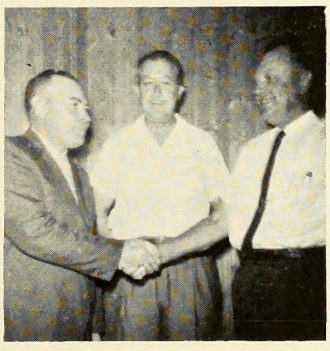
#3—Pres. R. L. Turner installs J. A. Saunders, Chairman; R. A. Ashworth, Vice Chairman. Not pictured, Clayton Carter, Secretary.



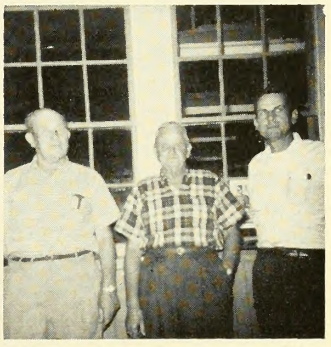
#4—J. V. Walters, Chairman; Pattie Abernathy, Secretary; J. I. Lynch, Vice Chairman.



#5—J. P. Brown, Chairman; Giles Crutcher, Vice Chairman. W. L. Dudley, Secretary.



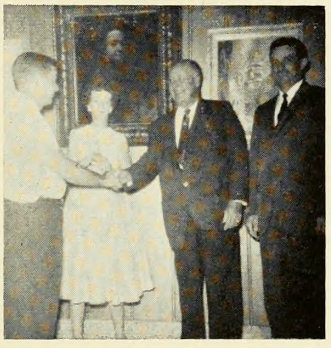
#6—Vice President L. H. Gunter installs K. C. Butler, Vice Chairman; Bill White, Secretary. Not pictured. Chairman R. A. Averitt.



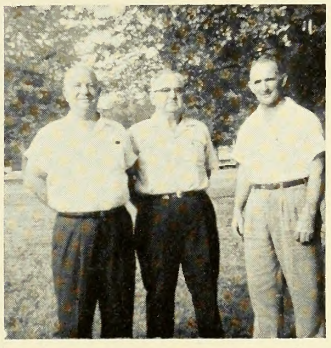
#7—First Vice Chairman O. N. Alley; Second Vice Chairman, J. E. Cann; Secretary A. L. Coltrane. Not pictured, Chairman J. B. Taylor.



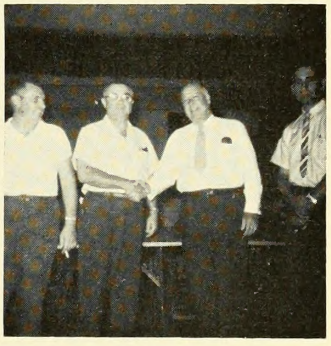
#8—President Turner installs Benton Burgess, Vice Chairman; Virginia Williamson, Secretary; Douglas Patrick, Chairman.



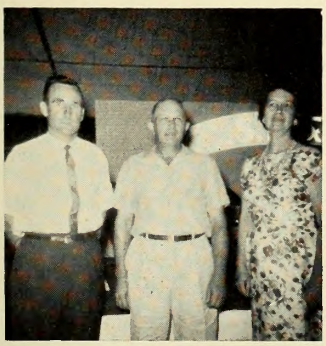
#9 — Luther Berrier, Chairman; Mrs. Marie Bracey, Secretary; Ken Westwood, Vice President, and installing officer; Bruce Everhart, Vice Chairman.



#10—Ed Finison, Chairman; P. R. McCorkle, Vice Chairman; A. M. Buchanan, Secretary.



#11—C. K. Smith, Vice Chairman; H. E. Koontz, Chairman; Ken Westwood, Vice President and installing officer; Ralph Bradshaw, Secretary.

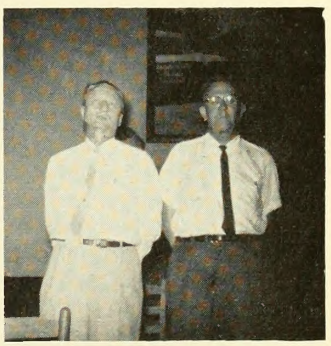


#12—K. E. Mauney, Chairman; L. F. Carpenter, Vice Chairman; Mrs. Martha Allen, Secretary.

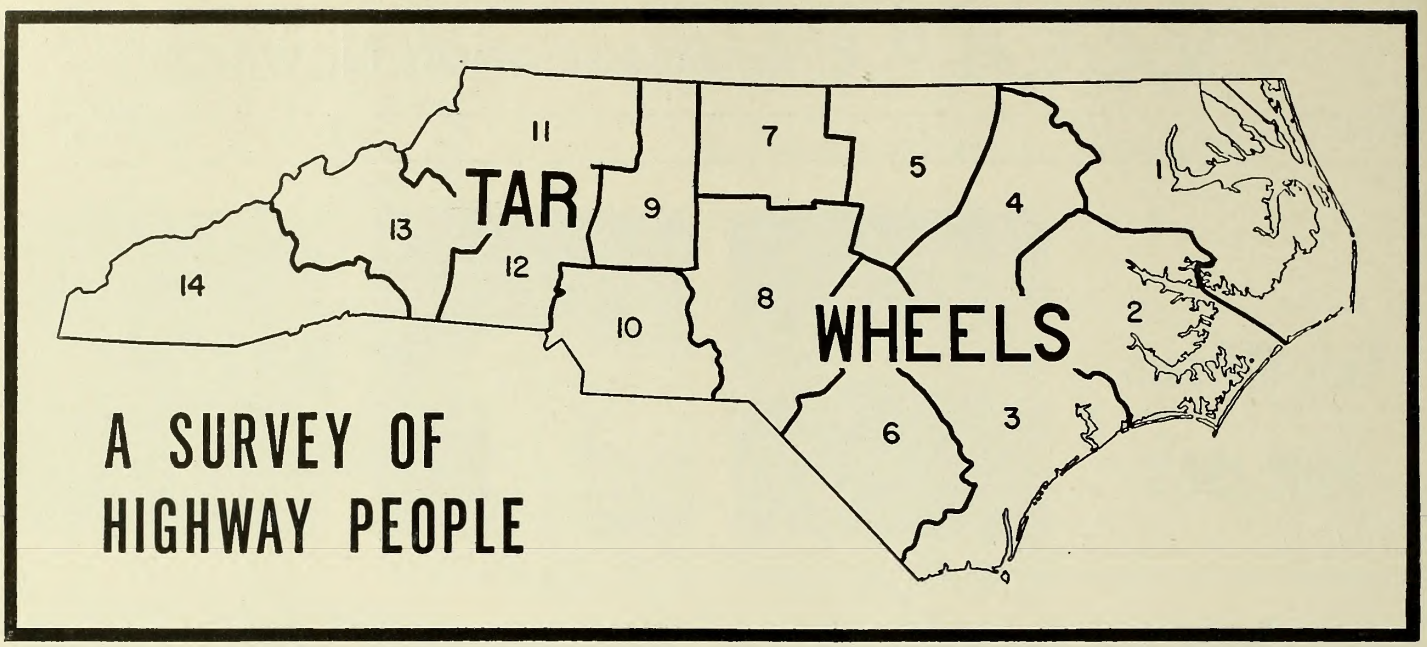
Pictures taken at Unit Meetings, but two failed to develop. Those pictures we are unable to include herewith are of the following officers:

Unit #13—Chairman G. J. Young
Vice-Chairman: J. M. Kistler
Secretary: Paul Robinson

Unit #14—Chairman: R. L. Pattillo
Vice-Chairman: Aston Heath
Secretary: J. H. Laughter



#15—W. F. Moody. Chairman; R. G. Setzer, Secretary. Not pictured, John Birdsall, Vice Chairman.



HEADQUARTERS

By JEWEL ADCOCK

PHOTOGRAMMETRY — Labor Day, and the advent of Fall, usually means the putting away of fishing equipment and boats and an end of vacations. *Wayne Robey*, however, is so enthusiastic about his water skiing that he will probably brave the winter cold with ear muffs and a fleece-lined life belt. *Jimmy Crutchfield* reports he is willing to stow his skis for a while. He and *Bob Moore* spent a week-end with Bob's parents at Lake James where Jimmy tried his luck at skiing. *Carl Dempsey* spent a week on the Outer Banks fishing. The *John Isley's* took their son, Mitchell, to Myrtle Beach for his first dip in the ocean. *Bill Hood* vacationed in Cleveland, Ohio with his family. *Bill Vidaub* is lecturing in the School of Design at N. C. State College two afternoons a week. Both *Bill Parker* and *Jimmy Crutchfield* are beginning training on the Kelsh. *Bill Hood* recently spent a week on the Outer Banks taking pictures for the 1962 State Map. The Photogrammetric Section has been honored in having Mr. Yao Ching Wu, Civil Engineer from the Taiwan (Formosa) Highway Bureau, visit for two weeks. Mr. Wu has been observing photogrammetric procedures in preparation of topographic maps.

BRIDGE—New faces in the Drafting section are *Ned Chapman*, *Bobby Powell* and Trainee *George Phillips*. *Madge Stell* is a new addition to the Permit Dept. Good luck to the following employees who recently left the Department: *John Billy Wiles; Bill Campbell* transferred to Roadway; and *Tom Wilson*, *Joe Nassif* and *Sonny Dean* returned to school. Proud new parents are: *Mr. and Mrs. Charles King*, a girl, Charlotte Ann, July 24; *Mr. and Mrs. Bill Hagwood*, a boy, Mark, July 3; *Mr. and Mrs. Bill Campbell*, a boy, Aug. 20;; *Mr. and Mrs. Kenneth Creech*, a girl, Mary Yvonne, Aug. 24; and *Mr. and Mrs. Joe Nassif*, a boy,



A HAPPY LITTLE BEACHCOMBER vacationing at Myrtle Beach is the two-year old son of Jo-Ann and Wilbur Turner. Mom is secretary to Chief Locating Engineer, Lloyd Cook, while Dad is a senior in Mechanical Engineering at State College.

Joseph, Jr., June 20. Employees wish an early recovery for *Art Noble*, who is at Memorial Hospital, Chapel Hill, undergoing treatment. It was nice to have *Jim Palmer*, who has been recuperating from a lengthy, serious illness, visit the office recently, and all hope he will soon return to work. Late vacationists who chose the beach as their favorite spot were: *Ransome Bennett*, *Landis Temple*, *Gerald White*, *Jim Wilder*, *Bob Hale*, *Mary Hines*, *Mr. Dillard*, *Mike Dawkins*, *Guy Alford*, *Buddy Wiggins*, and *Ben Terrell*, their families included, of course. New York City was the choice of *Annie Ruth Sugg* in July, *Jim Burney* in June, and *Bill Brown* with his wife, Page, in July. Back home to London, England went *Larry Colbert* for a two-week vacation during August to visit his family. It was Larry's first visit home in five years. The *Jack Parkers* went on a camping trip to Cape Hatteras. Vacations in the mountains were enjoyed by *Sonny Dean* at Blowing Rock, and the *Rhinhard Martins*, near Laurel Springs. The *C. B. Pattons* drove to Atchison, Kansas for a nice vacation.

MATERIALS AND TESTS—*Linda McGee*, Chemist, resigned to accept a teaching position at Hugh Morson Junior High School. Her replacement is *Mrs. Martha B. Blocker*, *E. P. Allen* resigned September 15 to accept a position with Conservation and Development; and *Johnny Meadows*, Materials Inspector from Thomasville, left in August to accept a position with Lone Star Cement. Congratulations to the *John W. Cones* upon the birth of a daughter, Carol LeAnn, August 27. Mrs. Cone is Secretary to *L. D. Hicks* in the Soils Lab.

BRIDGE MAINTENANCE—Congratulations to *Mr. and Mrs. Jimmy Lee* upon the birth of a daughter, Ellen Lynn, August 15. *Margaret Williford* and her husband vacationing along the Outer Banks recently. Wonder why *Marjorie Massengill* smiles when asked the question, "How was skiing at Carolina Beach during Labor Day weekend." Employees are happy to have *C. S. Biggs* back at work after being absent from work for some time due to illness. Our deepest sympathy is extended to the family of *L. D. Wiles*. Mr. Wiles, who died July 30, had been

with the Department since 1925 and was foreman at North Wilkesboro.

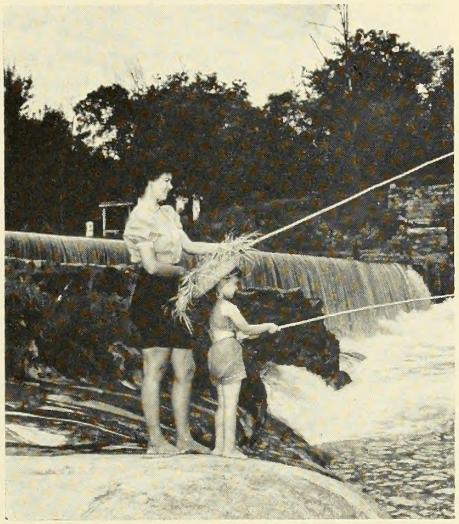
PLANNING — Summer vacationists and their vacation spots were: *Jean Carlyle*, Carolina Beach; *Mildred Buckman*, Myrtle Beach; *Doris Hall*, White Lake; *Phyllis Nelson*, Cape Cod and Maine; *Jo Ann Harmon*, Morehead City and Boone; *Marvin Cates* and *LeRoy Jay*, the District Civitan Convention at Morehead City; *Blanchie Bradley*, Lake George, New York; *James D. Bradford*, Boone; *Carey Hunter*, Wrightsville Beach; *A. E. Bevacqua*, New York; and *Dot Turner*, the beach. Welcome to *Joan Taylor*, new Research Assistant; and *Vernon Bishop*, Draftsman I, both in *Mr. Jay's* office. It's nice to have *David Ball, Jr.*, new Research Assistant, in *Mr. Bevacqua's* office. (Mapping Section) Summer employees leaving the Department for State College are: *Allen McDuffie* of Durham; *Ray Rackley*, Wilmington, *Dennis Pipkin* and *Larry Wallace* of Roanoke Rapids. *Charlie Vincent* of Murfreesboro left to enter Carolina. Late summer vacationists and their destinations were: *Nellie Tutor*, New York City and Florida; *Rowena Keith* and family, Boone; *Don Corwin*, Kansas; *Ben Johnson*, Georgia and Tennessee; *Allen Long* and *Frank Davis*, N. C. coast.

FILE ROOM — *Lena Morgan* enjoyed spending a week's vacation in August with her daughter, Barbara, at Wrightsville Beach. *Kay Denton* went to Philadelphia, Pa. for a weekend the first of September.

SAFETY—*Ann Sterling* reports a delightful vacation the first week in August with her daughters and Johnnie (their summer-time little boy from the local orphanage) at Tranquil Harbor. Department Head *Tarvia Jones* attended the recent annual conference of the Council of Safety and Personnel of the North Carolina Motor Carriers Association at Blowing Rock.

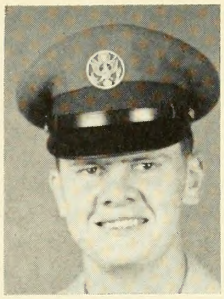
LANDSCAPE — July vacationers included *F. H. Bowen* and family at Wilmington Beach for a week; and *Kay Davis* and family, Florida. August vacationers were *W. R. Phelps* and wife, a weekend trip to Myrtle Beach; *R. W. Snell* and family, Atlantic Beach; and *Jane Critcher* and family, the mountains. Everyone reported a fine time.

RIGHT OF WAY—*Peggy Vollmar* left the Right of Way Department to become a proud mother of a seven-pound baby girl. Peggy's replacement is *Alex Lee* of Raleigh. *Martha Hunter* resigned to take a job with the Federal Government. She was replaced by *Judy Holder*, who is planning to be married on Sept. 16 to Jimmy Bishop of Raleigh, in the Ebenezer Methodist Church. *Eleanor Brantley* resembled Rudolph the Red Nose Reindeer after a recent weekend at Carolina Beach. Summer vacations are a lot of fun. *Rose Ann Harris* covered all of Florida in a week's time, spending most of her time in Jacksonville and Miami. And for Labor Day, she went to Carolian Beach with her boyfriend and family. *Eleanor Taylor* spent her vacation climbing mountains with her family. *Maxine White* took a trip to see her folks in Enterprise, Alabama and later traveled through the mountains to see her husband's people. *John Holms, Charlie Hartsock*, and *Ernie Ransdell* spent their vacations at home. The mountains was *John Honaberry's* choice. *Trulah Page* and her sister visited their niece in Philadelphia for a few days. *Warner Powell* and his family toured Eastern North Carolina on their vacation. Newest fanciers of the twist are *Harold Davis* and *Bill Tomlinson*. You are being watched, boys! Seen driving around town in his new Impala was *John Fields*. And he has a new home, too. Welcome to *Sammy Jackson*, new addition to the staff in Right of Way.



LAZY SUMMER DAYS will soon be memories. Shown trying their luck fishing at Lassiter's Mill stream are pretty Pina and Pam Powell, wife and little daughter of Photographer Harold Powell.

TRAFFIC ENGINEERING — Department Head *Robert A. Burch, Art Daniel* and *Robert Dodge* attended the annual meeting of the Institute of Traffic Engineers in Washington, D. C., Aug. 21-23. The meeting was followed by a World Traffic Engineering Conference, presented in four languages. We congratulate *Mr. Burch* for the honor of being elected First Vice President of Institute of Traffic Engineers. *Andy Ward* took his family to visit relatives in Darlington, S. C. for a week in August. *Emily* and Sam *Blount* spent Labor Day weekend with her parents at Wrightsville Beach.





Married almost a year, Nov. 19, 1960, Barbara and Robert Springle's new home will be in Italy.

Robert was recently home for 46 days' leave with the U. S. Air Force and left Sept. 5 for his new station at the Aviano Airforce Base in Italy, where he will be Air Traffic Control Operator. Barbara plans to resign her secretarial position in Personnel to join her husband sometime in October.

LOCATION—*Frances Smith* took her son and daughter to Virginia Beach Labor Day weekend to visit her sister. *Jo-Ann Turner* and little son, Alan, vacationed at Myrtle Beach with her family, and later spent a weekend at Morehead City with husband and son. *A. C. Dodson* vacationed at Myrtle Beach, with his wife and daughter for a week of relaxation and sunshine. *Gil Gonzalez*, with his wife and children, Tony and Carmen, enjoyed a trip to Ocean Drive, S. C., for a week in July. *Frank James'* wife, Dorothy, went to California for the marriage of their daughter recently, and remained awhile for a nice vacation. Employees miss *Raymond Neemers*, who returned to State College as a Junior in Industrial Engineering. *Ed Grady* recently had the pleasure of moving into a new home on Halford Drive. *Rod Richardson*, temporary draftsman, returned to school at State College; and *Jim Duncan* is also attending State, but is working part-time this fall. New faces in the Property Surveys Division are: *Marvin Cavanaugh, Floyd Taylor, Walt Burgess*, and *H. J. Mullen*. Welcome to all of you. *Paul Ferguson* and *L. A. Perry* went to summer camp for two weeks. Congratulations to *Mr. and Mrs. Donald Smith* upon the birth of an 8 lb., 9 oz. baby boy, Don, Jr., on Aug. 19.

FEDERAL CONTACT — Summer employee *Reba Babb* left to enter Woman's College this fall. *R. R. Trevathan* vacationed in the big State of Texas, where he visited friends for three weks. Coworkers surprised *"Slum" Yeargan* with a lovely birthday cake decorated with red roses Sept. 7. *Elizabeth Wiggins* went to Lawrenceville, Virginia to visit her father and mother for several days the last of August. *Verlus Mason* took his family to Western North Carolina for a week's vacation the first of August.

ROADWAY DESIGN — Recent vacation spots were: *Tommy Walkup* and wife, Auburn, Alabama; *Bob Walker* and family, Asheville; *Clarence Frizzell* and family, Tennessee and Indiana; *T. G. Moody* and his wife, Boone and Maggie Valley; *George Holland* and family, Kure Beach; the *R. D. Turner's*, Maryland and Pennsylvania; *Mr. and Mrs. J. D. Duncan*, Carolina Beach; *Martha Enscore* and husband, Morehead City; *George Sakas* and wife, Cape Canaveral, Florida; *David Arthurs* and wife, Florida; *Orval Riffe* and family, West Virginia; *Earl Willis* and family, Harrisburg, Pa.; *Lester Brown* and family, Long Beach; *Bryan Moore* and wife, the mountains; *Paul Moore* and family, Washington, D. C.; *Charlie Chambers* and family; Crescent Beach; *Joe Grzebien* and family, Windy Hill Beach; *Joe Tobert* and family, the mountains and Rock City, Teenessee. *John Birdsall* took *Howell Peele* in his Cessna 140 to Core Banks, where they took pictures of the sand fences for the Water Resources Board. (Both movies and still pictures from the air and from the ground.) They then flew to Nags Head to attend the Annual Meeting of the Professional Engineers of North Carolina. The *Sam Halls* visited friends in the mountains around Highlands and Burnsville and partook of some of that famous Nu-Wray Inn food. Then they journeyed to Winston-Salem to celebrate their 41st Wedding Anniversary with their family. *Robert M. Kirkpatrick*, piloting a scale model of the P-51 Mustang in the A. M. A. National Contest, won "the most perfectly finished model plane trophy". We commend Bob for winning this trophy since only one of these trophies is awarded in each State each year. Also, Mrs. Kirpatrick made her first flight in a national contest. Congratulations to *Raymond C. Crouse*, who was married to the former Miss Martha Boughman on Sunday, August 27, in the First Presbyterian Church in Raleigh. *Mr. and Mrs. James R. Moore* announce the birth of a daughter, Ellen Rena, on Aug. 12, 1961. New faces in Roadway are: *W. D. Campbell*, *Leroy Bowman* and *John G. Willis*, all in the Drafting section. Welcome to *Priscilla Arnold*, who replaced *Wanda Scott* Aug. 18. Good luck to *Ralph Owens*, *Richard Smith*, *William E. Bissette*, and *James Webb*, who recently resigned.

CONSTRUCTION — Two very happy and excited girls are *Barbara Williams* and *Jean Pearce*. Both recently received diamond rings. *Mary Murphy's* car was stolen June 24 and she has not seen it since. And Mary had just made her last payment on it! Summer vacationists were: *Sally Rayle*, Florida; *Mary Murphy*, the beach; *John H. Davis* & family, Long Beach; *Hunter Irving* and family, Myrtle Beach; *Virginia McDonald* and family, Myrtle Beach, Charleston, S. C., and Ocean Drive. Our heartfelt sympathy to *Jean Pearce* upon the recent death of her mother.

EQUIPMENT — Good luck to summer employees *Betsy Rogers* and *Judith Buchanan*, who returned to Woman's College and to *Betty Garvey*, a student at Meredith. Three o'clock Saturday, Sept. 23, is the time set for wedding bells to ring for *July Cahoon*. She will marry *Jonathan W. Tomlinson* at the Engelhard Christian Church in her hometown on that date. It's nice to have *Dora Cole* back at work after a month's illness. August was a month of birthdays in the Dept. *Evelyn Linville's* was the 10th, *Carolyn Fowler's* the 16th, *Nancy Fowler's* the 21st and *Dora Cole's* the 30th. *Johnny Lambeth* presented his wife with a new watch on their 11th wedding anniversary, Aug. 26. Vacation fever hit the Department with a bang. *Mr. Brinkley* spent a 10-day vacation on a trip to South Bend, Ind. where he visited his son. *Mr. Upton* spent the Fourth of July at Wrightsville Beach and fishing at Kure's. *Helen Barham* had a long weekend at Atlantic Beach. *Nellie Barnes* spent a week visiting relatives. *Margaret Seagroves* and *Dot Stephens* spent Labor Day weekend with their husbands at Carolina Beach. *Beatrice Harrison* went to Washington, D. C. and Virginia Beach. *Mary Jane McGillivray* flew to Boston, Sept. 2, for a two-week vacation on Cape Cod. *Sarah Peele*, *Nancy Fowler*, *Betty Massengill*, *Carolyn Fowler*, *Judy Buchanan*, *Betsy Rogers* and *Peggy Ferguson* all vacationed on weekends at Carolina or Myrtle Beach. *Johnny Lambeth* spent a week at Emerald Isle.

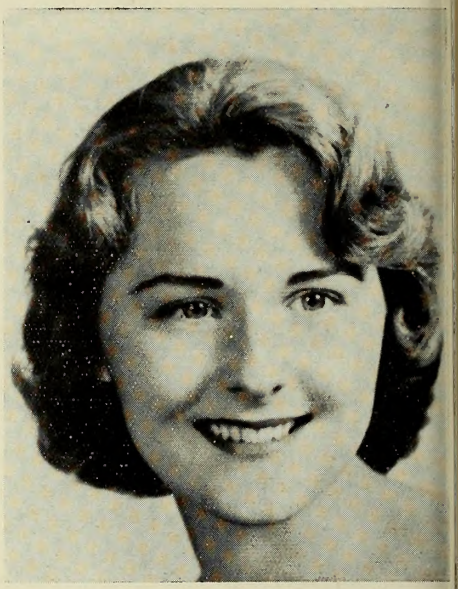
COMPENSATION — *Florine Boone* went to New Orleans, Louisiana for two weeks in September.

PURCHASING — Welcome to *W. A. Benton*, new Assistant Purchasing Agent from Tarboro. It's nice to have *Mrs. Ruth Jackson* as an addition to the clerical staff. Get well wishes to *Louise Shepherd* who has had a serious back operation.

CHIEF ENGINEER'S OFFICE — *Virginia Hassinger* is glad to have her son-in-law and daughter, Col. and Mrs. W. N. Holm, of Honolulu, Hawaii return to the States after a two-year tour of duty. Their new headquarters will be in Iowa, where Col. Holm will be head of R.O.T.C. at the University of Iowa.

SECONDARY ROADS — *George Willoughby* and his wife, Blanche, spent a week's vacation at Tranquil Harbor. George says it rained every day. *Sally Shimer* and her husband spent the Fourth of July weekend in the Blue Ridge Mountains and at Blowing Rock.

FINANCE—New employees are *Carolyn Smith* and *Lucille Ricks*, Key Punch Operators; *Nannie B. Upchurch* and *Frances Johnson*, Accounts payable; *David Tindall* and *William Rudd*, Payroll; *Johnny Poplin*, General Accounting; *Robert Barnes*, Audit & Systems; and welcome back to *Nancy Lewis*, Key Punch Operator and *Lee Carter*, General Accounting. Good luck to *Raymond Folwell*,



Miss Anne Catlette of Raleigh has joined the Public Relations Department temporarily as Associate Editor of ROADWAYS.

She is a graduate of St. Margaret's School in Virginia and attended Salem College. She formerly held a position with a publishing house in Richmond, Va.

Anne lives with her parents, Captain and Mrs. R. W. Catlette at 2706 Fairview Road.

Barbara Edwards, *Faye Pearce*, *Betty Swinson* and *Beverly Mangum*, who resigned recently. Vacationists were: *Ruth Brogden* and *Pat Mangum*, Florida; *Jim Austin*, *Shirley Hicks*, N. C. mountains; *Mary Leonard*, Hampton, Virginia. *Bettie Ann Watkins* became the bride of Graden Johnson on June 22 in the Beulah Christian Church. They live in Wendell. It's nice to have *Joan Williams* back at work after several weeks' illness.

PERSONNEL — *Bob Smith* took his wife and little son to Myrtle Beach for several days' vacation in July. *Sam Badgett* vacationed at Morehead City for several days. *Fred Parker* chose to stay home on his vacation.

PUBLIC RELATIONS — *Mrs. Jeanne Hawthorne*, Associate Editor of ROADWAYS, left the Department August 16 to take six-months' maternity leave.

DIVISION ONE

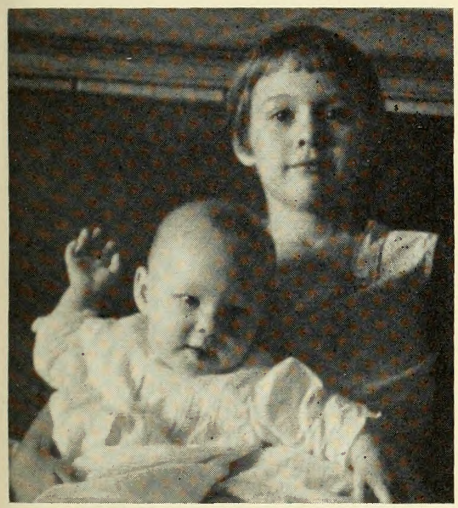
By ROY E. WEST

Division Correspondent

BABY NEWS comes in this month from three Division One families. Congratulations to *Mr.* and Mrs. *J. R. Duke* who announce the birth of a son, born August 11; Mr. and Mrs. *J. O. Sellers*, on the recent adoption of a daughter, Amy Elizabeth; and *Mr.* and Mrs. *A. E. Bradley*, on the birth of a son.

SPORTING new cars these days are Division Engineer *W. N. Spruill* and Assistant Division Engineer *E. H. Baggs*.

SUMMER VACATIONERS were: *George K. Mack* who visitied relatives in western Virginia and toured Skyline Drive; *V. L. Perry* and family vacationed at Buxton with relatives; *L. K. Thompson* toured Washington, D. C. and mountains of Virginia; *E. M. Snow* and family visited relatives in Asheboro and Asheville; *Dorothy Gard* spent a week at Croatan Lodge at Nags Head; Mr. and Mrs. *Willie Long* sunned at Wrightsville Beach; Mr. and Mrs. *C. B. Mumford* took



HI DAD! Smiling for a prond Dad are the children of J. O. Sellars. Lisa is age 5, Amy is 5½ months.

their daughter to the mountains of North Carolina and Tennessee; Maintenance Supervisor and Mrs. *R. C. Burch* vacationed in Rockingham with their daughter, Paige, who is educational Director at the First Baptist Church; *C. E. Stallings* went to Nags Head; and *L. N. Collier* took time off for a trip to Buckroe Beach, Virginia.

DEEPEST SYMPATHY to the family of *J. B. Seymour* who died recently at Albemarle Hospital. Seymour was Bridge Tender on the Pasquotank River since January 1, 1944. Also we extend sympathy to *T. C. Liverman* in the death of his Mother, Mrs. Evan Hines Liverman.

WISHES for a speedy recovery are extended to: *E. L. Doxey*, Maintenance Foreman 4 in Currituck County; *J. C. Monds* of Belvidere; and *Arthur N. Thompson* of Elizabeth City, who was recently in the hospital with a heart condition.

A NEW HOME in Menola is a real joy to Sign Supervisor and Mrs. *Eugene Lindsay*.

TRANSFERRED recently was *Irving Cullens*, Engineering Aide 2 with the Construction Department, from work on the Alligator River Bridge in Dare-Tyrrell Counties to the Resident Engineer's Office in Elizabeth City.

WELCOME BACK to: *W. W. Prescott* who has been out with eye injuries; *R. M. Saunders* of the Locating Department; *J. G. Harrell, Jr.*, who was on a temporary job in Hillsboro; and *Shirley Callis*, Steno in the Division Office who replaces *Mrs. Alice Norville*. Alice should be sending us news of a new arrival very soon!

DIVISION TWO

By ROY D. FRANKS

Division Correspondent

FISHERMAN'S WOE is an old disease, dating back to the time when that familiar cartoon appeared showing a bedraggled angier hauling in an old boot. When *J. Q. Adams* and *Herbert Gary* tried their luck fishing, results proved exasperating. . . they forget to plug the boat and the last report was a broken rod. One consolation is that deer season isn't far away!

GET WELL wished to *Leonard Cunningham* and Mrs. *Stanley A. West*.

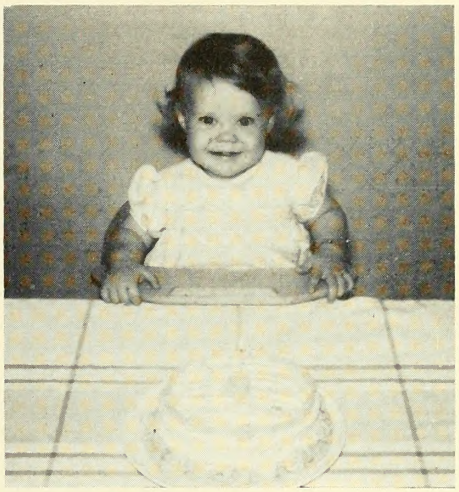
SPORTING NEW CARS are *R. A. Merritt*, *L. E. Dawson*, and *J. L. Briley*.

SUNNING around North Carolina were the Carl Abees at Nags Head; the *E. T. Suttons* and *A. P. Howards* at Minnesott Beach; *Anne Askew* at Kure Beach; and the *H. L. Brileys* at Morehead City and Richmond, Va.

SYMPATHY is extended to *P. L. Fields* on the loss of his brother, James Richard of Kinston, and families of *Elisha Beaman* who died of a heart attack and *F. V. Rhem* who succumbed after a long illness; and to *J. E. "Pete" Keel* upon the death of his Mother.

THE WELCOME MAT is out for the following: *Mrs. Joan Jordan*, Secretary in the Appraisal Department who replaces *Mrs. Ruby Marrison; J. O. Shellers*, Division Right Of Way, who replaces *R. G. Gregory*, who has entered Bob Jones University prior to entering the ministry; and *O. R. Bullock* of the Appraisal Department who was transferred from Asheville, N. C.

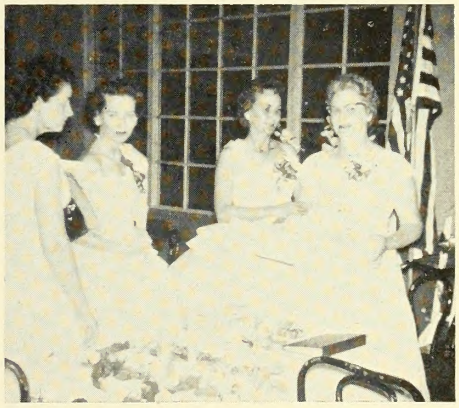
RETIREMENTS effected July 1 were *T. F. Harris*, Maintenance Foreman IV; *C. B. Davis*, Laborer Special Landscape Department; and *G. W. Kittrell*, Bridge Tender.



MY FIRST BIRTHDAY! Little Karen Thomas, Germanborn granddaughter of E. L. Tripps, will soon arrive for a visit with her grandparents.

BABY BOY Michael Lloyd has some mighty proud parents, the *L. E. Tyndalls*. Congratulations!

CONSTRUCTION TRANFERS — Temporary *C. T. Mallison*, Inspector II to Division 10; *Lloyd Wilson*, Inspector II, to Division 10; *O. R. Whitehurst* Inspector I, to Division 5; *James A. Hancock*, Inspector I, to Division 7; Permanent



GREAT POCAHONTAS of North Carolina, Mrs. Kathleen Woolard, is shown receiving gifts during a tour of Western North Carolina. She is the wife of Mechanic E. M. Woolard.

tranfers: *C. D. McKeithan*, Inspector III; *W. L. Melville*, Highway Engineer III; and *James M. Turnage*, Inspector I, all to Division 5.

RECENT GUESTS at Fort Bragg were *R. E. Smith* with the National

Guard and *J. R. Wilson* with the Army Reserve.

Temporary duty in Concord has been completed by *K. A. Rouse.*

RECUPERATING at home after two bouts in the Beaufort Hospital is *O. S. Denby,* Machanic Foreman.

VISITING the office recently was former Division Engineer, *R. Markham.*

ALSO VACATIONING this summer was Division Manager *Fred Edwards, Jr.* in the mountains of Western North Carolina and Division Office Secretaries *Thelma Exum* and *Hazel Baker* spent a wet weekend in Manteo.

DIVISION THREE

By IRENE HEWETT

Division Correspondent

DRIVING a new station wagon seems to agree with *Nell Straughan,* Steno in the Right Of Way office. Also smiling these days is *Bob Trevathan* who has recently moved into a new home.

CLINTON FOLKS welcome *V. G. English* and family who have moved from Wilmington. English is presently Road Maintenance Supervisor.

NATIONAL GUARD training kept *Thomas King* up in Camp Perry, Ohio, for 19 days.

DEEPEST SYMPATHY is extended to Mr. and Mrs. *C. W. Sutton* whose youngest son, Robert Michael, was fatally injured July 14.

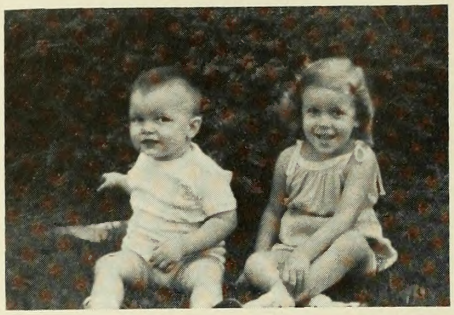
FLORIDA IN JULY sounded good to *Floyd Bass* and his family so they drove down to enjoy a sunny vacation. Beach trips attracted many, and *Bobby Powell* and his family braved the coastal waters on a recent trip through Ocracoke, Cape Hatteras, Nags Head and Manteo. Also visiting the coast were the *John Naylors, Tom Halls* and *Joe Hamiltons.* Sunning at Wrightsville Beach were *Marie Ferrell* and family and *N. S. Westbrook.*

WELCOME to *Charles L. Creer* and *E. L. Tharp* who have returned to Wilmington.

ACCIDENTS have caused several to be out during the past summer. Hospitalized recently were *Maxton Autry* and *W. Z. Bryan,* both of the Road Oil Department. The son of *J. S. Gale* was in a car accident in June which paralyzed him. Employees wish him a quick recovery. We also hope *Fleet Riley, D. L. Carter* and *Horace Watkins* are feeling better soon.

GOOD LUCK to *Durwood Potter* on his new job. Also, *Carl Lee Mintz* separated August 11 due to a heart attack.

IN APPRECIATION of service, employees gathered to honor *Minnie May Smith* at a dinner at the Highway Shop in Clinton. Mrs. Smith was presented a Lady Hamilton wrist watch, as a token of their friendship.



HOWDY STRANGER! C. F. Pridgen, Clerk II of Road Oil is mighty pleased with his two children, Melanie Gale, age 3, and Cletus F. Pridgen, Jr., age 15 months.

DIVISION FOUR

By JERRY BOYKIN

Division Correspondent

NEW COMMISSIONER, Mr. *Worth Joyner,* recently visited division headquarters.

WELCOME to *W. E. Coggins* of Traffic Services Department. He was formerly with Edgecombe Maintenance.

TRAFFIC SERVICES has 100% membership in the Employees Association for the fiscal year, 1961-1962. Newly elected Unit Officers are *J. V. Walters,* Chairman; *J. I. Lynch,* Vice-Chairman; and *Pat Abernathy,* Secretary-Treasurer.

UNTO THESE HILLS, Chimney Rock and High Point furniture factories were among the several stops Mr. and Mrs. *J. W. Evans* made on their recent tour of Western North Carolina.

BEACHCOMBERS this summer included: *Katie Braswell* at Virginia Beach; *J. I. Lynch* at Myrtle Beach; *Kenneth Hill;* and *E. E. Bordeaux* and family at Topsail. The Bordeauxs are happy to have their son and daughter in-law now living in Wayne County, after residing in Richmond, Va.

ALSO VACATIONING were *Stephen Haynes; Willie Reason;* and Mrs. *E. S. Peabody* who spent a week at White Lake.

OUT-OF-STATE travelers this summer were *George King* visiting relatives in New York and *Fred Hettinger* who also spent a few days in the Empire State with family. Division Correspondent, *Jerry Boykin,* and her family toured Washington, D. C. *Mrs. Don Simon,* stenographer in the Division Four Office went with her husband for a trip through Pennsylvania.

PROUD PARENTS, Mr. and Mrs. *John G. Lamm,* announce the adoption of a daughter, three month old Kathy Gray.

HURRICANES didn't interfere this year with Mr. and Mrs. *Sam Lindsay's* return visit to Atlantic Beach.

AT WORK after recent eye surgery is *R. W. Dawson.* Also back after an extended illness is *Jack Turner.*

A NEW HOME has kept *J. G. Matthews* busy unpacking and trying to settle down.

DIVISION FIVE

By PEGGY BRIGHT

Division Correspondent

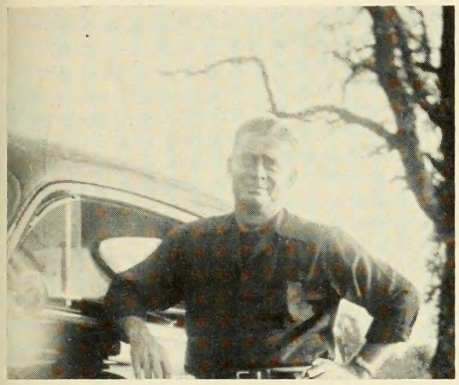
VACATIONERS are still talking about their trips to the coast and summer beach excursions. *Mattie K. Hall* and family enjoyed two week of rest and relaxation at Myrtle Beach and White Lake. Afterwards she left for Charlotte to visit Mr. Hall's parents. Also vacationing at Myrtle Beach with his family was *Curtis Williams.* Road Oil Supervisor *Robert Murray* and family went boating and skiing near their cottage on Kerr Lake. *Peggy Bright* and children camped out at Palmers Point, Kerr Lake, in August. Mr. and Mrs. *John Fuller* spent the second week of August at their cottage at Nags Head. Staff Engineer *W. L. Dudley* took his family to Morehead City in July. *Hilda Harris,* Steno in District II vacationed for several days at Myrtle Beach. *Neil Harris,* Clerk in District II went to Carolina Beach with his family. *Cloyce Alford,* Virginia and Lynn spent their vacation in Morehead City. Touring New York and Canada this summer were the *R. M. Ball* family. Fishing and sunning at Atlantic Beach was *Hoyle Tucker* and family. *J. M. Cooke* drove his family down to Wrightsville Beach for a week.



THANKS FOLKS! Z. W. Holder is pictured at his recent retirement party, given by friends in Division Five.

Others on vacation were *Sam Averette, L. W. Clay, E. B. Critcher, L. L. Reece, H. G. Wheeler, R. G. Williams, Elvin Lumpkin, Cornelius Perry, Ed Bullock, G. W. Justice, M. G. Keith, W. T. Moore, W. L. Pennell, C. M. Whitaker A. W. Carden, G. C. Riley, F. G. Sherron, W. H. Walker, F. C. Jones,* and *I. J. Mangum.*

SYMPATHY is extended to Mr. *George W. Justice* and family whose infant son, James Wilbur Justice, died August 23, from accidental burns.



Sympathy is extended to the family of L. L. Lawrence, Durham County, Dist. 2, upon his death. Lawrence was an area foreman, and retired December, 1960.

FISH STORIES are circulating about *J. B. Alford, J. H. Beddingfield,* and *M. Z Morris.* Wonder if they're Bib Stories or Big Fish that caused so much talk?

NOW working on a temporary basis in Franklin County is *W. E. Smith.*

J. W. JENKINS, retired Division Engineer, is set for an honest to goodness "Life of Leisure". He was honored at a farewell party June 30 by friends and associates with gifts to suit his every whim. . . . He can now relax in either of two chaise lounges, watch a portable T.V., check the time with an engraved gold wrist watch, and if he gets the urge to travel, use new luggage for a vacation.

Friends and associates gathered for the party at Umstead Park and *M. T. Adkins,* present Division Engineer, recalled many of the incidents throughout Jenkins 41 years of service with the Highway Commission. The gifts were from employees in the Fifth Division who seemed determined to assure Jenkins an enjoyable and comfortable retirement.

WELCOME BACK to *B. F. Holsclaw, M. L. Mangum, V. C. Forbush, Marshall Cash, F. A. Aiken, K. M. Wood, R. M. Catlett,* and *H. R. Denton.* All have been out on sick leave.

ALSO RETIRED are *W. P. Pearce, W. L. Poole,* and *H. S. Tilley.*

TEN YEAR SAFETY AWARDS were given to *G. E. Crutcher, G. L. Ellington, R. L. Royster, W. A. Ellington, W. A. Laws, L. L. Reece, R. G. Williams, H. S. Whitt* and *H. G. Wheeler.*

MORE FISH STORIES-This time from *G. E. Crutcher, H. L. Riggan, Joe Greenway, E. C. Adcock* and *Buddy Smith* who reported good luck off the N. C. coast.

GRANVILLE COUNTY employees enjoyed a brunswick stew supper at the Maintenance Quarters.

FORMER PATIENT *C. O. Vaughan* has returned home after leaving the hospital.

DIVISION SEVEN

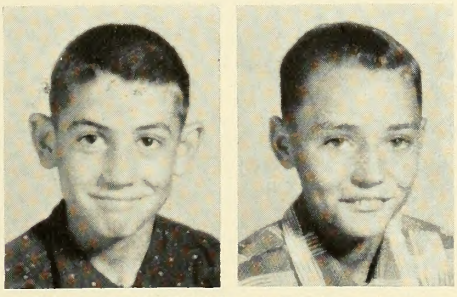
By P. L. WELCH

Division Correspondent

SOAP BOX DERBY winners evidently grow in *Robert L. Shelton's* family. One son, Leonard won two races and Carl won first place in a separate event, both racing in the July 15 Soap Box Derby, Westover Terrace at Greensboro. Congratulations!

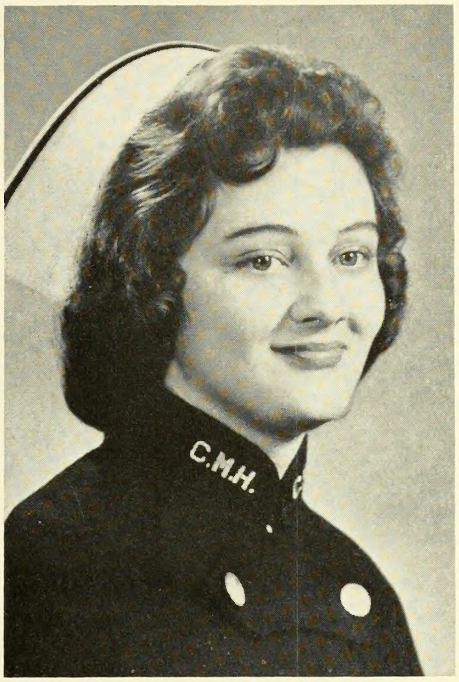
TWO WEEKS of training at Fort Jackson, S. C. kept *Jimmy Joyner,* Construction, pretty busy this summer. Welcome back!

VACATIONERS covered alot of territory this summer. Sunning at Carolina Beach were Mr. and *Mrs. Calvin Howard* and daughter Melanie. Mrs. Howard is a Stenographer in the Graham District Office. Sunning in Florida were *Jerry Bullard,* Construction, and his wife. Labor Day weekend. Maintenance Supervisor *O. N. Alley* and family toured both coasts of Florida. On Labor Day weekend, Alley then headed for a weekend of baseball in New York. Creole visitors this summer were *W. E. Kallam* who took his family to New Orleans, La. The *J. C. Martins* went to Long Beach. Maintenance Supervisor *J. B. Taylor* took his



THE SHELTONS of Division Seven, Dist. 2, have two sons in school this year. They are, left to right, Carl Shelton, and Leonard Shelton.

wife fishing off Morehead and she caught an 18½ pound King Mackeral. Other anglers were *I. O. Cooke,* District Mechanic Foreman, and his wife. Also vacationing at Carolina Beach were Mr. and *Mrs. Dan Jackson* and son, Timothy. Mrs. Jackson is a Clerk II in the Graham District Office. The family of *J. W. Welson* enjoyed a trip to High Rock Lake. Off for a trip to Myrtle Beach were the *D. R. Joyces,* the family of *C. M. Jones, C. F. Vanhoy* and family and Mr. and Mrs. *M. S. Stafford.* Vacationing in the mountains was *L. R. Reece* and wife.



A PATIENT'S DREAM! Pretty Margie Sherran seems to be the nicest way to help cure all ills. Her father is connected with the Division Seven office.

DIVISION EIGHT

By VIRGINIA WILLIAMSON

Division Correspondent

SAN FRANCISCO'S famous Golden Gate Bridge was among the many places of interest *Ivan Trogden* and his family saw during their recent trip to California. Trogden, a mechanic at the Asheboro Equipment Shop, returned with his daughter, grandaughter, and family by way of the Mojave Desert, the Grand Canyon, and Houston, Texas, where they visited relatives.

TRAINING at the Air National Guard Camp in Illinois for two weeks were *Dallas Clark* and *Ted Austin,* both with the Right of Way Department.

ENJOYING a new home in Southern Pines is a busy business according to the *Carl Ackers.*

VACATIONERS include: *Henry Jordan* at Wrightsville Beach; Florida and points south for *John Hall,* District Engineer; *Sara Edwards* sunned at the beach; *Iva* and Horace *Teague* went to the mountains

of Western N. C.; and *Joe Adams* took his family to Washington to visit friends and tour the Capital, and returned by way of the beach.

SYMPATHY is extended to *Mr.* and Mrs. *C. B. Murray* on the birth and death of a son, on August 15. Murray, who has another son, is with the Construction Department in Wagram.

RETURNING soon to Rockingham will be Eddie Darden, son of District Engineer *E. C. Darden*. Young Darden is presently completing service training with the Army.



Congratulations to J. L. Stewart, Maintenance Supervisor who was recently awarded a 35 year service pin.

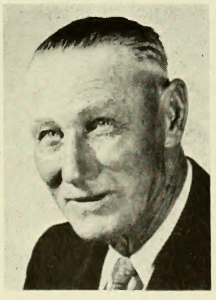
EMPLOYEES extend sympathy to *Gentry Morgan*, Office Engineer, upon the sudden death of his father.

ANOTHER BOY! Landscape Department's *James M. Perkins* reports the arrival of a son. Congratulations!

THIRTY-FIVE year pins were awarded to *J. L. Stewart*, Road Maintenance Supervisor; Lee County; *Curtis L. Britt*, Truck Driver, Montgomery County; and *Howard A. Sherrill*, Maintenance Foreman, Richmond County.

CONGRATULATIONS to Mr. and Mrs. *Clarence Smith*, District Three, on the arrival of a baby; and to Mr. and Mrs. *C. J. McDonald* on the birth of their first child.

RETIRED after 37 years of service is *Charlie Martin*, Gang Foreman.



After 36 years with the State Highway Commission, Ralph Lee Wicker, Asphalt, Division 8, retired. Parting comment: Working with the Highway Commission is the most enjoyable work I've ever done.

Wicker

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

AIR FORCE days are now over for David Setzer, son of Mr. and Mrs. *E. L. Setzer* of Rowan County. David is now home after serving with Uncle Sam for four years.

AWARDS for 35 years of service have been presented to *E. E. Murphy*, Maintenance Foreman IV, Davie County, and *O. C. Tuttle*, Maintenance Foreman I, Stokes County.

WELCOME to *Linda Gail Moore* of the Supervision Department.

RETIREMENT DAYS are busy ones according to *Willie C. Kesler*, Maintenance Foreman, Rowan County, who retired July 1, after serving over 42 years with the County and State Highway Commission.

BABY NEWS is good news for Grandfather *E. E. Murphy*, Maintenance Foreman IV, Davie County. Another grandson, named Michael Scott, arrived June 6.



Norket

A/3c Alvin R. Norket, son of Mr. and Mrs. Paul R. Norket gets an official greeting from Uncle Sam. Air Force assignments will keep him busy.

DEEPEST SYMPATHY is extended to *Roy G. Holshourer*, Truck Driver, Rowan County, upon the death of his wife August 25.

RECUPERATING at home after a long stay in the hospital is *Fred L. Everhart*, Maintenance Supervisor, Davidson County.

WELCOME BACK to *D. C. Sheperd*, Machine Operator, who seems fully recovered from a leg ailment.

NEW PARENTS: Mr. and Mrs. *Frank Duggins*, a daughter named Barbara Ann, born on June 26; Mr. and Mrs. *C. D. Williams*, a daughter, Lisa Dawn, born June 17; Mr. and Mrs. *E. R. Crouse*, a new arrival born July 31.

BEST WISHES to *O. G. McClamrock*, Maintenance Foreman II, Davie County and *W. L. Reavis*, Machine Operator III, Davie County on their retirement, effective July 1.

DIVISION TEN

By W. M. CROWDER

Division Correspondent

SILVER WEDDING ANNIVERSARY wishes greeted *Wilbur A. Irvin* and his wife at a recent surprise reception in their honor.

EIGHTEEN RATTLERS weren't enought to keep *Peter Preston Brock* from conquering a giant 60 inch rattlesnake southeast of Wadesboro! Brock, former Anson County Maintenance Foreman, retired some years ago.

DOWN AMONG THE PALMS in Daytona Beach, Florida, *George W. Hannah* spent a week visiting his brother, Henry L. Hanna, who owns the colorful Valley Forge Motel in the Heart of Daytona Beach.

AFTER 33 YEARS with the State Highway Department, *Sam A. Faulkner* retired August 31. "Mr. Sam" as he is known to most, plans to relax on his farm and attend to his interesting hobby . . .bee colonies. Everyone joins in wishing you many years of good fortune.

VACATIONISTS WERE: Maintenance Supervisor and Mrs. *H. N. McWhirter*, who spent several days in Washington D. C. and then made an extensive tour of Williamsburg, Va.; *William M. Pender* and family vacationed in Florida; Maintenance Supervisor *Van Eudy* and family visited Watertown, Maryland.

CONGRATULATIONS to *R. V. Deese* and his wife on the birth of a daughter Cathryn Louise. Also, *B. D. Herrin, Jr.*, of Huntersville is the proud father of a son, Anthony Luther.

SICK LIST: *W. M. Gibson; W. A. "Andy" Little; P. D. Brock;* and *M. A. Smith*. We wish each a speedy recovery.

DIVISION ELEVEN

By CORA LEE GREER

Division Correspondent

GOLF COURSE plans are exciting news for *U. D. Pitts* who is having an 18 hole course constructed at Whitnel. Golf enthusiasts in that area should be excited too!

NEW EMPLOYEES: *O. B. Hodges; Bobby Snow; J. B. Branch; F. J. Brindle; Paul Joines; G. P. Upchurch ;Tommy Farmer; T. O. Edwards; W. J. Reynolds; B. G. Watson; R. G. McNeill; H. R. Foster;* and *W. D. Parsons*. Welcome!

FAMILIES AND PERSONNEL of the Elkin Construction group had their an-

nual picnic at Veteran's Park in Mount Airy on August 13.

SYMPATHY IS EXTENDED to the following: *R. H. Shore, Jr.*, in the death of his father; the family of *C. G. Holder* who died September 1; the family of *Webb Weatherman* in the death of his mother; the family of *Orville Harmon* in the death of his mother.

VACATIONING recently were: *T. E. Gwyn* and family at Myrtle Beach; *C. K. Smith* and family at Morehead City; *C. A. Amburn* and family visited his brother in Baltimore Maryland; and *Betty Marion* and her husband at Myrtle Beach.

BEST WISHES go to *J. D. Gwyn* who retired September 1 after 40 years with the State Highway Department.

CONGRATULATIONS TO: *Charles J. Ferguson* of Location on the birth of a son, Edward Jerry, August 7; *D. J. McKeon* of Right of Way on the birth of a daughter, Katherine; and *Colon Barber* on the birth of a daughter.

TWO WEEKS of training are completed by *Jack Johnson* and *David Hardister* of Construction who went to National Guard Camp at Fort Bragg.

BACK TO COLLEGE for *Walter L. Doughton, Jr.; Bill Brookshire; W. R. Hubbard Jr.; C. C. Wagoner; J. H. Absher; Ernest Treadway; K. W. Amburn; B. R. Steelman; A. R. White;* and *C. D. Harris.*

ON THE JOB after surgery is *Sam Cabe.*

GET WELL SOON — *J. L. Caudill* and *G. C. White.*

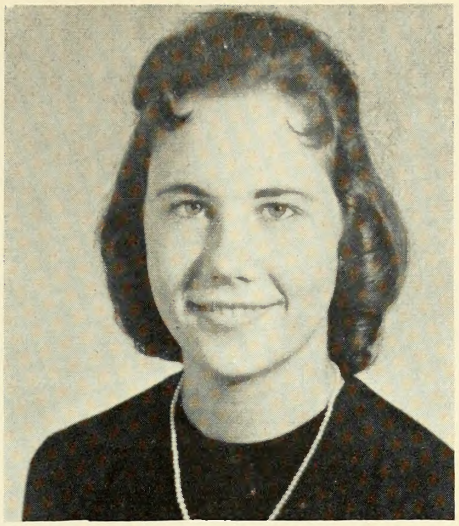
DIVISION TWELVE

By JEAN CLINE

Division Correspondent

TWIN SONS were born to Mr. and Mrs. *W. E. Holcomb* of Troutman on July 22. Their names are Clark William and Mark William. Noted with interest is that these are the second set of twins born to Iredell County employees. Way back in 1937 twins were born to Mr. and Mrs. *Ben W. Gibson*, and now both these twins are married and have children of their own.

VACATIONERS THIS SUMMER were: *A. J. Mitchell* and family traveled to Canada; *Fred Snow* and family visited friends in Lynchburg, Va.; *R. L. Harris* went with his son and wife to Myrtle Beach; *B. R. Mills* family toured New Bern and sunned at Atlantic Beach; Mr. and Mrs. *J. T. Watt* took their children to Cherry Grove Beach; journeying to Florida this summer was *Fred Summers;*



HIGH SCHOOL DAYS for Frances Modene Wilson, daughter of R. Wilson, Division Twelve.

Mrs. Lois Knox vacationed in West Palm Beach, Florida, Retired Division Engineer *E. L. Kemper* and his wife took a seven week trip to California to visit their oldest son, Hudson, and then went to Wichita, Kansas to visit with their youngest son, Dick and his family; Tom and Barbara Wyke visited with their parents, Division Engineer *W. W. Wyke* before moving to Pittsburg, Pa.;*Ed Wilcox* enjoyed a trip to the beach; *O. D. Bridges* and *C. O. Smith* went fishing near Myrtle Beach; *Mr.* and Mrs. *Gaither Edney* took a trip to the Outer Banks; Landscape Supervisor *William Patrick* and his wife drove to Richmond, Va.; vacationing in New York was *F. M. Capps* of the Shelby Construction Party; employees of the Shelby Construction residency and families at Myrtle Beach this summer were *E. A. Crowder, R. R. Nichols* and *R. A. Green;* Mr. and Mrs. *Ottie Setzer* went to New Orleans, Daytona Beach, and Myrtle Beach; Mr. and Mrs. *T. C. Walker* and daughter visited relatives in Cache, Oklahoma; *R. M. Holland* toured Montreal and Ottawo Canada, and went sightseeing in Washington, D. C. New York and the State of Maine.

BEST WISHES to Mr. and *Mrs. Tommy Weathers* who were married on August 19. Mrs. Weathers was the former Brenda Moser, Stenographer in the Right of Way Department.

A SPEEDY RECOVERY to: *Jack Turner* of Traffic Services Department; Iredells's Area Foreman *J. B. Murdock; Morris Runyan* of Shelby Construction Party; *J. W. Earp, L. L. Price, W. H. Chapman, S. J. Keever,* Mrs. *J. W. Fox,* Mrs. *A. L. Levan*—all of Alexander County. Recuperating in Catawaba County are: *C. A. Poovey; J. H. Poovey; W. P. Lindberger; H. T. Teague;* and *C. H. Euhy.* On sick leave in Iredell County were: *W. H. Tomlin; Mrs. C. V. Tilley.*

BACK AT WORK are: *B. L. Reep* and *T. E. Blanton; B. J. Runyon* and *Morris Runyon* of the Shelby Construction Party.

SYMPATHY is extended to: *G. G. Bess* and family in the loss of his Father-in-law Mr. Hardy George; *Raleigh Poston* and family in the death of his brother, Grady Poston; *Sam Brinkley,* retired Road Oil Supervisor, in the loss of his brother.

CONGRATULATIONS to: *Mr.* and Mrs. *Dale Wright* on the birth of a son, Everett Dale, Jr., born July 7; *Mr.* and Mrs. *C. W. Keener* on the birth of a son, William Thompson, born July 12; the *D. L. Cashs* on the birth of a baby boy, July 25; and *Mr.* and Mrs. *W. H. Manley* on the birth of a daughter, Betty Joyce, on July 17.

"Asheville 1980"

Citizens of Asheville and Buncombe County got a look at what their street and highway pattern should be in 1980 at a June 14 public hearing in the mountain city. The plan, a result of a fifteen months study by Wilbur Smith and Associates, calls for a 71 mile system of expressways, freeways, major and collector streets which would cost an estimated (conservative) $37,553,000.

Preparation of the master thoroughfare plan for Asheville was financed jointly by the City of Asheville and the State Highway Commission in cooperation with the U. S. Bureau of Public Roads and is in line with the Highway Commission's policy of preparing or financing preparation of long-range municipal street studies all over North Carolina. Some of the larger cities such as Charlotte, Winston-Salem, Greensboro, Raleigh and Asheville have engaged outside consultants to handle the work because of the magnitude and complexity of the task. In a great many of the smaller municipalities the Advance Planning Department of the Highway Commission is doing the job.

Smith's Asheville plan includes studies on Interstate routes 26 and 40 in the Asheville metropolitan area along with an NC 191 freeway, a tunnel connector freeway in the area of Beaucatcher Mountain, the Weaverville Bypass freeway and a loop expressway around the central business district of the city. In addition there are several collector streets which will need improvement between now and 1980, according to the Smith report.

(Continued On Page 16)

(Continued From Page 15)

Finding the land necessary for future highway and street connections is a big problem in the Asheville area because of two rivers and several mountain ranges but these restrictions tend to punctuate the need for good thoroughfare planning in a city whose population is expected to jump from 54,000 in 1960 to approximately 62,800 in the next two decades. Buncombe County population, including Asheville, should rise from its present 130,074 to approximately 222,000 by 1980.

By far the most expensive and useful highway construction assured for the area will be Interstate routes 26 and 40 which intersect just southwest of the city. In the metropolitan area contruction of 13.07 miles of the Interstate is tabbed at $14,012,000. These routes will serve Asheville on three sides-east, west and south.

From the intersection of the Interstate routes, Smith proposes an NC 191 freeway extending northeasterly toward the city and following the general routing of Hanover Street to Patton Avenue. From this point the freeway would tie into the Smoky Mountain Bridge and the $6,000,000 east-west expressway which was opened to traffic earlier this year but which terminates at Beaucatcher Mountain just to the east of the central business district.

Smith calls for the easterly extension of the East-West Expressway with a new bore through Beaucatcher Mountain. From this point the freeway would extend southeasterly and connect with Interstate 40 near Oakley. Cost estimated for the tunnel connector freeway was tabbed at $6,103,000.

To the northwest of the city the plan calls for a Weaverville Bypass facility which would follow generally the eastern bank of the French Broad River and would tie in with the East-West Expressway just east of the Smoky Mountain Bridge.

Also included in the major expressway network for Asheville is a loop around the central business district which would extend from the East-West Expressway at Montford Avenue around the western, southern and eastern extremities of the central business district to tie in again with the East-West Expressway at Charlotte Street.

In addition to the major expressway system recommended for Asheville, there are fourteen minor improvements to existing streets and extensions of existing streets. Next step in the development of the Asheville plan is mutual adoption by both the city and the State Highway Commission.



Director of Highways W. F. Babcock addresses members of AASHO COMMITTEE ON DESIGN meeting in Winston-Salem. Also seated at the Speakers Table are left to right Commissioner James K. Glenn, Winston-Salem; Babcock; John Surratt, Mayor of Winston-Salem; and R. W. McGowan, Assistant Chief Engineer —Pre Construction, State Highway Commission.

AASHO MEETS

Meeting at the Robert E. Lee Hotel in Winston-Salem, N. C. the AASHO COMMITTEE ON DESIGN emphasized the importance of gearing highway design for the future.

Presiding at the meeting were George Langer, Chairman, Committee on Design and Assistant State Highway Engineer, California Division of Highways and Wallace J. Liddle, Secretary of Commerce on Design (Bureau of Public Roads, Washington, D. C.)

Among the topic on the agenda were: A discussion of Design Factors that affect Traffic Operations on Freeways, with respect to Safety, Capacity or Service; Coordination of Planning of Freeway Locations with Urban Development in Cities; and a report on Joint Research Project, N. C. State College, School of Engineering and North Carolina Highway Commission.

TRAINING FILMS

There have recently been produced in the Photogrammetric Division of the Department of Locations and Surveys, a number of training films on outstanding road and/or maintenance operations of the State Highway Commission. Included are the following:

(1) "Sand-Seal Retreatment"

(2) "Drag-Seal Retreatment"

(3) "Leveling Course Prior to Resurfacing"

(4) "Sub-Sealing Old Concrete Pavements"

(5) "Mat Stone Binder Over Old Concrete Pavements"

(6) "Hetherington & Berner Cold-Mix Paver Converted to a Hot-Mix Paver"

The photography was accomplished by Pete Bourke, who is available for showing any or all of these. Arrangements for showing should be made through the office of Lloyd H. Cook.

Snow Plow Blades

R. C. Bunch, Maintenance Supervisor in Division I, has devised a way to utilize old FWD snow plow blades by mounting them on the front of a motor grader. The blades are cut down from 10 to 8 feet in width and mounted with parts salvaged from old scarifiers. A welder can build the rig in one day.

Bunch uses the attachment primarily to push trash piles off the right-of-way and for building fills, thus releasing a bulldozer for heavier type work.

North Carolina Traffic

(Continued From Page 5)

There are isolated cases where, due to geographical characteristics, an area may now be virtually inaccessable. In such cases, the development of a new highway into the area will provide the needed access, and thereby open it up for economic and sociological development.

Still another assumption is that a vehicle on a given route number, such as US 1, will continue on this route for its whole journey. The facts are **first**, the local drivers—and these constitute the vast majority—pay no attention whatever to route numbers, shifting from one to another at any junction, using bypasses at will, and traveling many different route segments on even a fairly short trip. **Second**, the "stranger" driver, who does follow route signs, may enter a city or town on one route, leave on another, turn into a third, and even return to the original route within fifty miles or so. The route numbers are merely marked paths to inform the unfamiliar driver, but he is by no means restricted to follow any single path. The creation of a new route number seldom has much effect on total traffic using it.

These are some of the basic traffic facts we have learned in our continuous traffic studies in North Carolina for the past twenty years. In addition, we have made special intensive traffic studies at almost every city and town in the State, to determine the actual pattern of traffic demand in each area.

Using these facts, together with trend data on traffic, population, probable future land use, and other guides, we can reasonably anticipate the traffic demand patterns of the future, and thereby be guided in our recommendations as to need, location, nature and design of improvements which should be made, and which should be designed so as to be adequate, or easily expanded, to serve the needs of the next twenty years. Indeed, this is the primary objective of our whole State Highway Department—"To provide and maintain adequate facilities for the movement of traffic." To the extent that we do this, we best serve the needs and the welfare of our people, in whose service we are dedicated.

N. C. SIGNS

(Continued From Page 3)

Missing signs pose the most serious problem for sign men because it is easy to overlook a spot where a sign should be and for this reason the marker may go unnoticed for days or even weeks. Such thefts also create hazards for drivers. The unsuspecting motorist may run up on a dangerous curve, bad grade or dangerous intersection with no forewarning. Accidents with resultant property damage, personal injury or even death have been caused by such lack of adequate warnings.

Most common damage to signs comes from rocks, pop bottles and bullets which dent or pierce the sign face. A pop bottle thrown from a fast moving car may have more than a 75 MPH impact against the face of a metal or wooden sign. Broken glass at the base or even on the roadway itself stands as mute evidence that a prankster has tested his aim and found it true at the expense of the North Carolina taxpayer. Chances are that his accuracy cost $15.00 or more to say nothing of the labor of replacing the damaged marker.

North Carolina has long-standing laws to the effect that any person who willfully defaces, damages or removes signs shall be guilty of a misdemeanor but apprehension of the guilty party is difficult and conviction even rarer.

Highway officials feel about the only way to minimize sign damage is through education and appeals to the common decency of individuals responsible. In the main, persons who get a kick out of damaging a roadside sign probably don't realize just how much damage they and their kind are doing.

While much of the vandalism of signs comes on remote secondary roads it is by no means limited to such facilities. It is commonplace on major primary and interstate roads as well. Not long ago a state highway official returned to Raleigh from an Asheville trip to report that he found sixteen damaged signs in a row along US 64.

On one 16 mile stretch on interstate roadway, sign crews replaced between 50 and 75 delineators in one week. These are small glass reflectors mounted on metal posts at the edge of the shoulders and are especially helpful for nighttime driving.

Damage is not limited to the familiar "stop" and "yield" signs and the like. Vandals seem to take delight in working over the huge new interstate signs which really cost money.

The Highway Department spends about $6.00 per square foot for the big white on green interstate informational signs and the letters are made of laminated plastic, highly susceptible to damage. Any hard blow against a letter will break the seal which holds it and replacement of the letter or letters is the only repair that is effective.

To the men responsible for maintenance of roadside signs it seem a horrible waste of money, manpower and time when vandals take aim and fire away at expensive State property, but the $100,000 disgrace will continue until a method of getting through to the vandals is found.

If you've ever been tempted to take a pot shot at a roadside sign just for kicks try to keep in mind that it takes the state tax on 200 gallons of gas just to replace one stop sign at $10.57, even more to put up a new "yield" sign at more than $15.00.

With schools soon starting across the state, children will be walking or riding by a great many roadside signs. Parents are urged to remind children that there are plenty of worthless targets just as good as a highway sign where they can test their accuracy.

That highway sign is too expensive and too important to the safety of North Carolina drivers to be damaged beyond repair simply at the whim of a thoughtless person. Leave it where it is doing the job it was meant to perform—directing people to where they're going and showing them the safest way to get there.

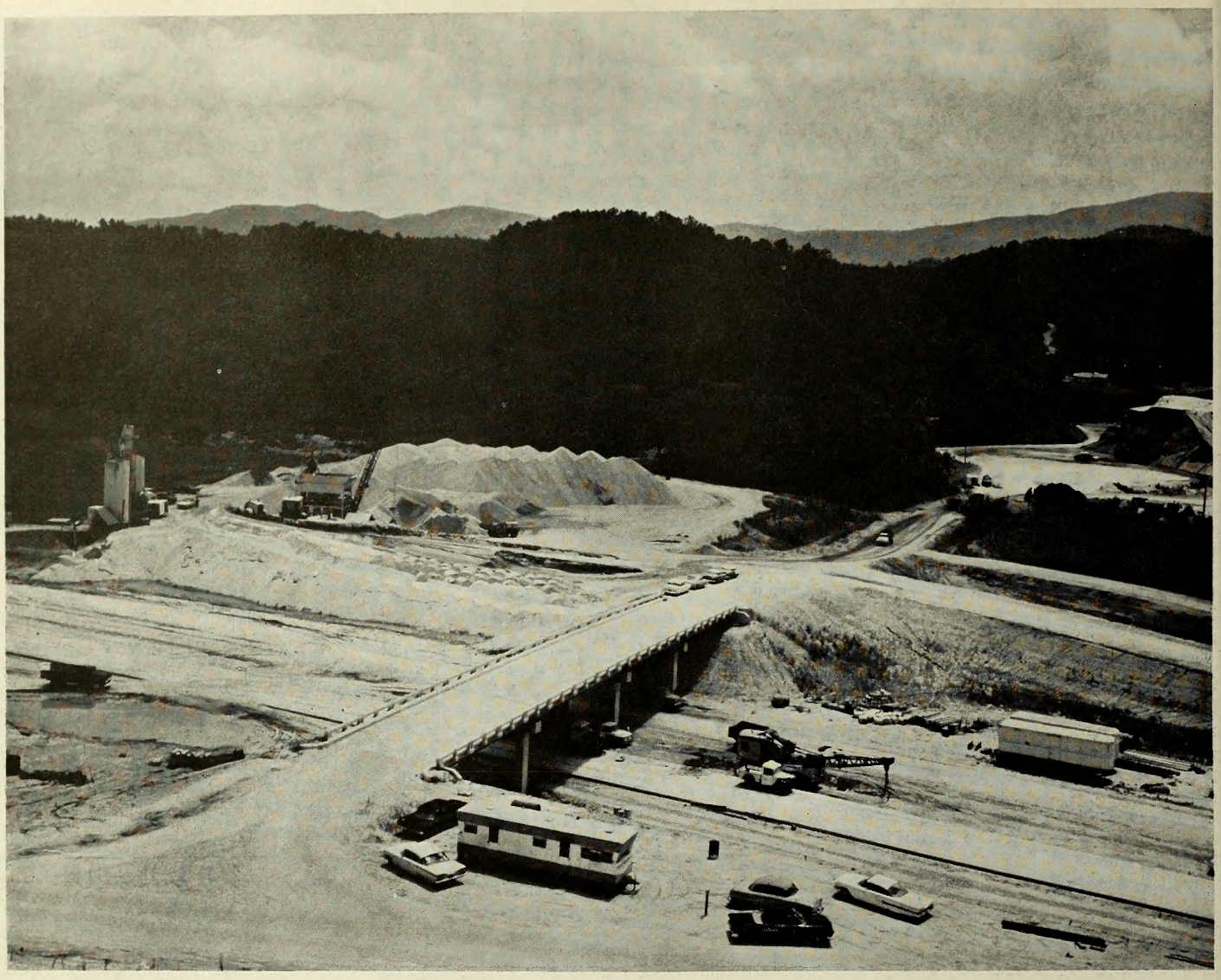
Maintenance

(Continued From Page 6)

in this operation alone to maintain the present system of approximately 71,000 miles. It is doubtful that many of the public realize the enormity of this phase of road service in our State. Yet, cost trends coupled with increasing traffic and population densities point to an increased cost in the years ahead. The challenge to keep this cost in line is tremendous. Constant effort to organize and operate efficiently is a must. North Carolina has been most fortunate to have a history of long standing in dedication and service from its employees. This same dedication will continue to get this maintenance job done in traditional standards and service, and with a zeal to always improve where we can.

Thoughts and suggestions from personnel of the Commission on maintenance matters will always be welcomed by the Maintenance Department. Let us hear from you on what you think can be done to improve these matters.

Husband to sleepy, tousled wife at breakfast table: "When do you go back to the beauty shop for a check-up?"



Blythe Brothers Construction Company of Charlotte is making excellent progress with the concrete surfacing of 13.9 miles of Interstate 40 in McDowell County. The roadway stretches from the end of the opened section near Marion west to the Old Fort-Ridgecrest Road. Contract bid was $2,643,761.30. Photo courtesy Hugh Overturf.

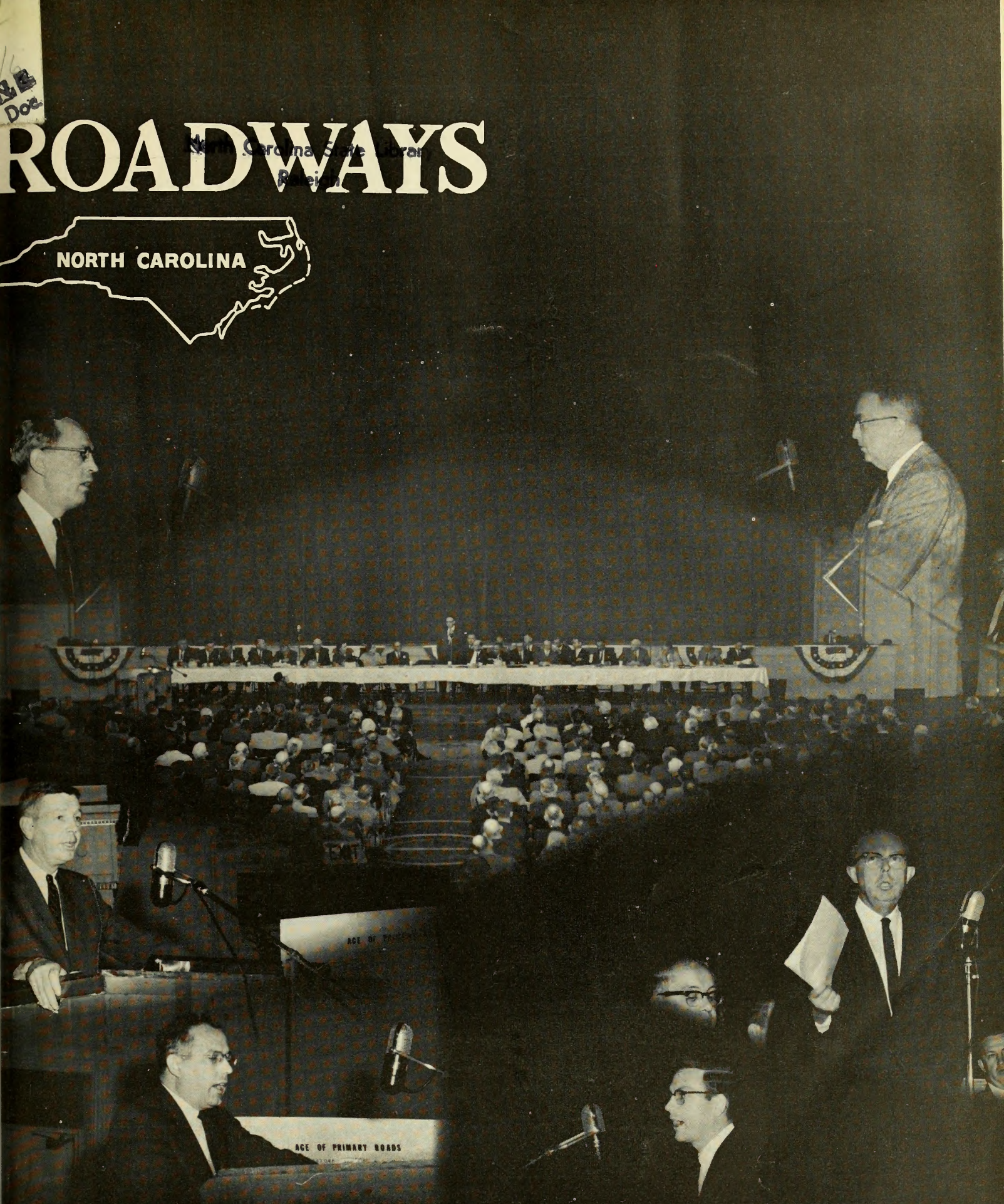
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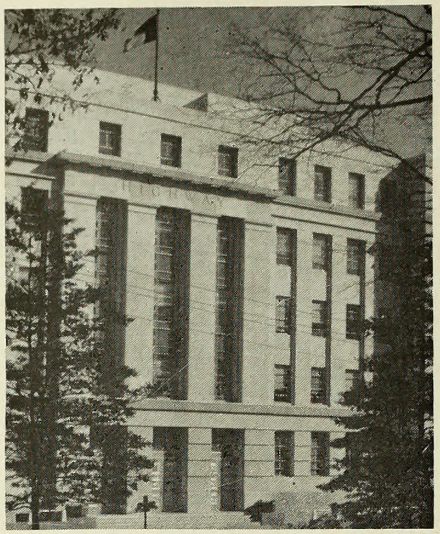
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A MAGAZINE FOR EMPLOYEES
OF THE STATE HIGHWAY COMMISSION

NOVEMBER - DECEMBER 1961

ROADWAYS MAGAZINE



A Publication For
N. C. Highway Employees

VOLUME XI
NUMBER VI

Published bi-monthly by the Public Relations Department of the State Highway Commission, Raleigh, N. C.

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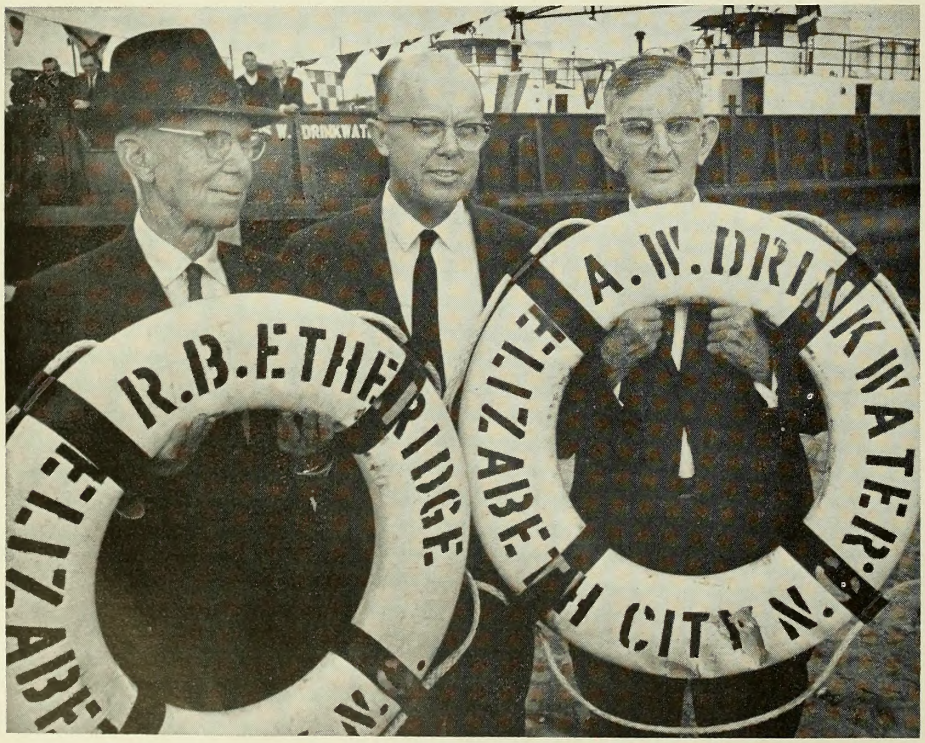
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NOVEMBER-DECEMBER

ROGER R. JACKSON, JR.....Editor
ANNE W. CATLETTE.....Assoc. Editor



Ferry-naming ceremonies recently honored two Tar Heel old-timers known throughout the State. R. Bruce Ethridge, left, and Alpheus W. Drinkwater, right, are pictured with Highway Commission Chairman Merrill Evans after the sea-water christening of the two ferries named in their honor.

SASHO

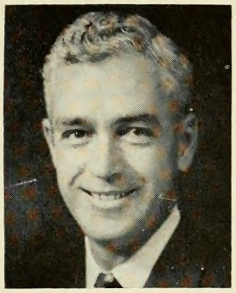
Little Rock, Arkansas was recent host to the 20th Annual Convention of the Southeastern Association of State Highway Officials, November 26-30.

North Carolina State Highway Commission officials are members of twelve different committees, composed of representatives from Alabama, Arkansas, Florida, Georgia, Kentucky, Louisana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia. Each committee is headed by a Chairman and Secretary. At the November convention of SASHO, C. W. Lee, North Carolina State Highway Commission Chief Engineer was elected as Chairman of the Commercial Vehicle Sizes and Weights Committee.

THE COVER

Photographer Bill Hood portrays lively debates highlighting a public hearing held in Western North Carolina. **Story on page 9.**

Hardy Named Safety Officer



Herbert W. Hardy

The Highway Commission announces the appointment of Greene County Representative Herbert W. Hardy as Safety Officer for the North Carolina State Highway Commission. Hardy, who is a farmer by trade and now resides in Maury, N. C., will have the overall promotion and supervision of safety programs in the fourteen divisions of the Highway Commission. Hardy, 42, is replacing H. D. Tarvia Jones, 65, who is retiring December 31, 1961. Highway Commission Chairman Merrill Evans in expressing his pleasure in the appointment stated that Hardy would begin his association with the Commission prior to the departure of Jones.

Hardy is the son of Herbert Seth and Mattie (Stevenson) Hardy. He was born in Chatham County July 24, 1919, attended Sanford Public Schools and the University of North Carolina, graduating in 1941. He was permonent President of his senior class at Carolina. Since graduation, he has kept in close contact with the affairs of the University, serving as a member of the Board of Directors of the Alumni Association, and as a member of the Board of Trustees of the Consolidated University. He has been elected to three consecutive terms in the General Assembly as Representative from Greene County. He has served as a member of the Commission on Interstate Commerce, and during the 1961 Session of the Legislature, he was Chairman of the House Committee on Banks and Banking. He is a combat veteran of World War II and the Korean Conflict. He is an active Methodist, having served his church as a trustee, steward, and Sunday School Teacher. His wife is the former Miss Wilma C. Fry, and they have three children, Herbert Stevenson, John Carlton, and Barbara Lynn.

Secondary Roads Allocations

By George Willoughby

Administrative Assistant

Governor Sanford gave the Secondary Roads System a tremendous boost in October when he allocated an additional seven million dollars for the improvement of Secondary Roads. These funds are in addition to the eighteen million dollars which is the 1961-62 Allocation for Secondary Roads. For the past several years the Secondary Road Allocation has been eighteen million dollars per year.

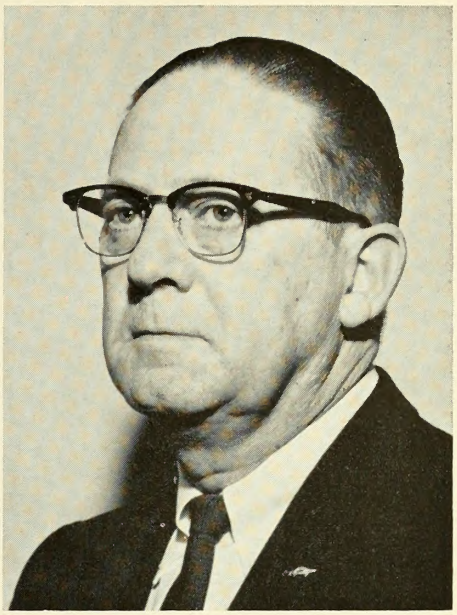
The Highway Commissioners have been busily engaged in programming the original allocation and have set-up 16½ million dollars for Secondary Road Improvements which included the paving of some 710 miles and the stabilization or general improvement of 725 miles of unpaved roads. They will now begin programming the additional seven million dollars.

At the present time the State of North Carolina has some 57,200 miles of Secondary Roads on her system of which some 32,500 miles are now unpaved. This is the largest network of secondary roads under one governing body in the United States.

The Director of Secondary Roads, Ben Roney, is by no means a stranger to the problems facing the Highway Commission in pushing its growing Secondary Roads Program. Mr. Roney served as Private Secretary to the late Governor Kerr Scott during the Rural Road Bond Program, which brought a new day to the farmers of North Carolina. Mr. Roney is the first to point out that the needs of the rural areas at that time differ greatly from their needs at the present. During the Bond Program the Highway Commission embarked upon a program which was designed to "get the farmer out of the mud". During the years of this program the State saw the paving of some 10,000 miles of Secondary Roads completed.

The Highway Commission is now faced with the problem of providing Secondary

(Continued on page 19)



Otis M. Banks

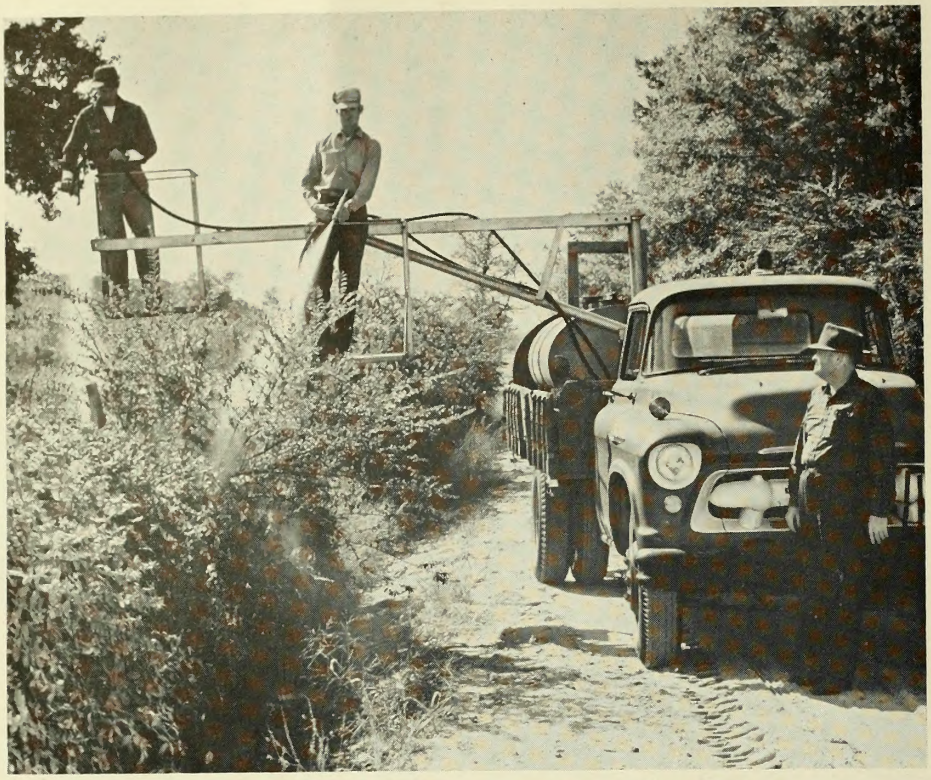
BANKS RETURNS TO N.C.S.H.P.E.A.

Otis Banks, recently appointed Highway Commission Personnel Officer, has resigned to accept an appointment as Executive Secretary of the State Highway and Prison Employees Association. Banks held this position for fourteen years prior to becoming Highway Personnel Officer on October 23, 1961.

The General Executive Committee of the Employees Association initiated a "draft" movement and prevailed upon Banks to accept the appointment in view of the delicate nature of the position and the need for an experienced person to serve in this capacity. Banks stated there was complete harmony between himself and all officials of the Highway Commission, that he had received complete cooperation of everyone in the Commission and he regreted the necessity of leaving the Personnel position after only one month.

Banks stated his decision was his own and that he had received telephone calls and letters from Highway and Prison employees all over the State prevailing upon him to accept the Association's position as Executive Secretary. He stated the office would be complemented in the

(Continued on page 19)



Landscape Supervisor, J. R. Felton, is shown with Edward Phipps, left, and Roger W. Miller, center, in the process of brush control spraying in Division One. (Photo courtesy Harold Powell).

"Project H"

Enters Third Year

By W. L. Sorrell

Administrative Assistant,

Landscape Department

In 1959 the North Carolina Highway Commission entered into a contract with North Carolina State College for the purpose of more effectively developing herbicides, chemical plant killers, for use on highway rights of way.

The project, known as research Project "H" is coordinated through the North Carolina State College Highway Research Program, Charles R. McCullough, Coordinator. The project is directed jointly by the Field Crops Division, State College and the Landscape Department, Highway Commission. Robert P. Upchurch, Assistant Professor of Field Crops and John A. Keaton, Research Supervisor are directing the research for State College and J. A. Saunders, Area Landscape Engineer and W. L. Sorrell, Administrative Assistant are directing the Landscape Department phase of the research contract.

In the summer of 1959, research plots were established in various Divisions throughout the State. With the cooperation of Division personnel areas presenting varied woody growth problems such as tall brush inside of curves and at intersections were selected, treated, and marked for later evaluation. Since the cost of controlling woody growth on the right of way is greater than other plant growth problems, considerably more time has been applied to this problem. However, extensive experiments have also been conducted and evaluated on the control of grass and weeds in hard to mow areas such as under guard rails, fences and around sign posts. Experiments have also been conducted in the use of MH-30 for the purpose of retarding the growth of grass, thus reducing the frequency of mowing.

The first two years of the contract were completed in June of 1961. During

(Continued on page 20)

RIGHT OF WAY

In providing adequate highway service for the people of North Carolina, the State Highway Commission must often acquire farm, residential or business property to get a right-of-way for public use.

This "right-of-way" is really a right of passage across private property and is an old and important principle of our democratic process.

Highway engineers have many ways of determining when road improvements or new highways are necessary. Most familar to motorists perhaps are the rubber tube counters across our roads. These indicate the number of vehicles travelling the highways, and aid in pointing out increased traffic flow in some areas.

Another means employed by the Commission's Planning Department are "origin-destination surveys" when motorists are interviewed and asked where their trip began and where it will end.

Careful records of the growth in population of counties and cities aid. Highway Commission engineers is keeping close tabs on industrial and business growth in every area of the State. It also watches carefully the increased number of motor vehicles which use the highways.

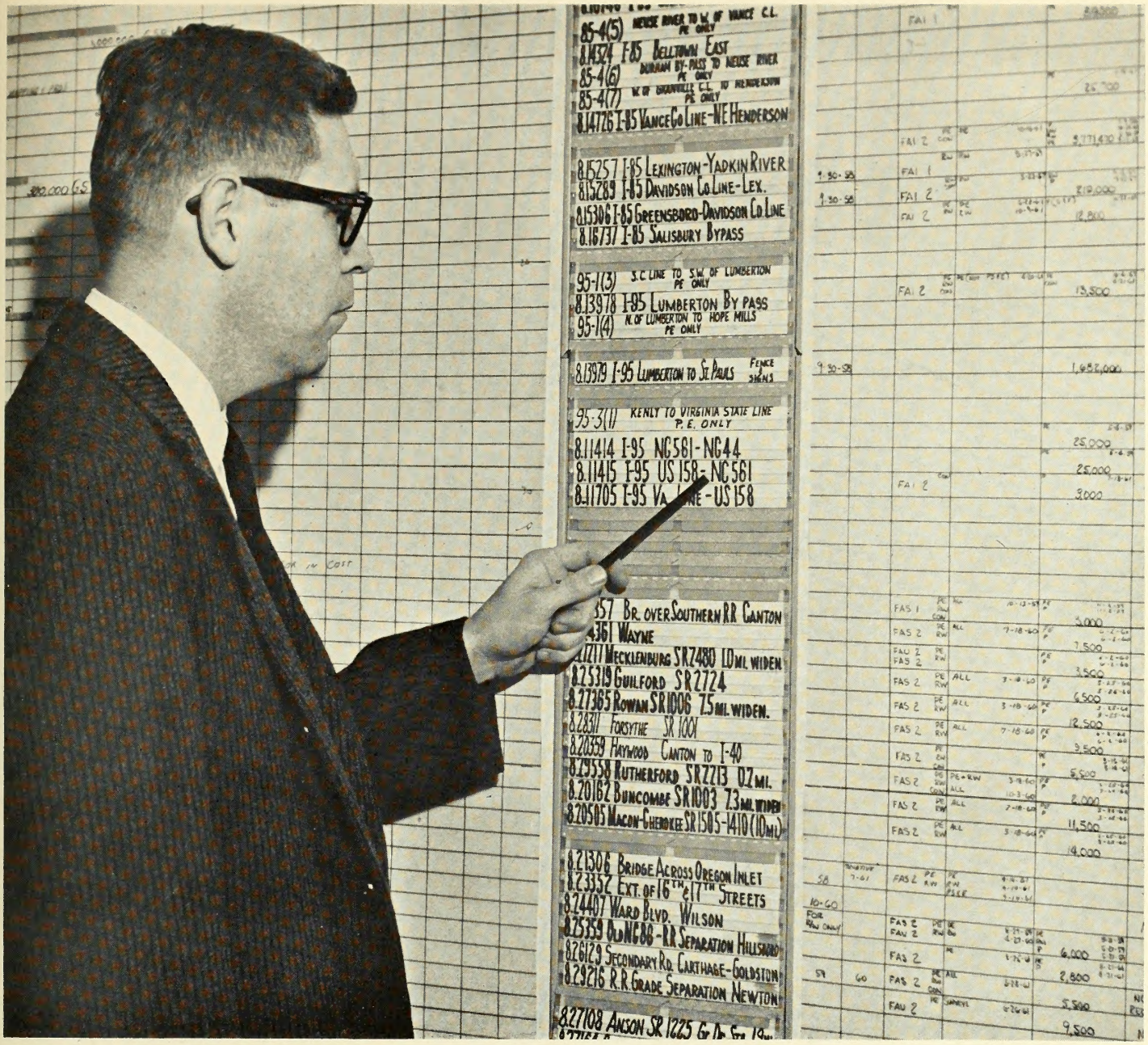
Tomorrow's traffic means advanced planning of our highways, and the big Interstate highway program is a good example of spending public funds wisely for future highway needs.

When considering routes for new highways or relocating old ones, the Commission employs expert location engineers who work on a combination of several possible locations before recommending any one or two routes.

Besides such considerations as traffic demand, the lay of the land, estimated costs, and necessary bridges, locating engineers try to pick the location which will best serve the motoring public and least inconvenience the affected property owners.

When property is envolved due to a proposed new highway, after appraisals are made and revised, a Commission

(Continued on page 20)



Project Control-Information Artery for Highway System

By Bill Ingram

Project Control Officer

The most recent change within the Highway Commission organization has been the development of the Project Control Department. This department is charged with the responsibility of keeping the up-to-date status of all State projects from the date the Highway Commission approves the project is completed. The Project Control Department also has the responsibility for the preparation of work orders authorizing Department and Divisions to proceed with work approved by the Commission.

Why is it necessary that information concerning status of projects by centralized in one location If a review is made of the number of projects approved by the Highway Commission which are either under construction or in various stages of pre-construction, it will indicate that there are almost 2,000 projects throughout the State that have been approved by the Commission authorizing improvements on both Primary and Secondary systems. There are approximately 250 major Interstate, Primary, and Secondary projects in various stages of pre-construction engineering. Secondary Road projects set up for road improvements in each of the counties across the State amount to 1,000 projects. This number will probably increase to approximately 1,500 by the end of 1961. In addition, there are approximately 500 other projects being constructed on both the Primary and Secondary Systems from State-wide funds, Urban funds and Access Road Funds. Finally, there are approximately 300 projects under contract. These are primarily Federal Aid

(Continued on page 18)

LINDSAY C. WARREN

BRIDGE ACROSS ALLIGATOR RIVER TO BE NAMED IN HIS HONOR

The magnificent new bridge spanning the Alligator River in Eastern North Carolina will be named after a man who has championed the cause of that area of the State for more than 40 years. — Lindsay C. Warren.

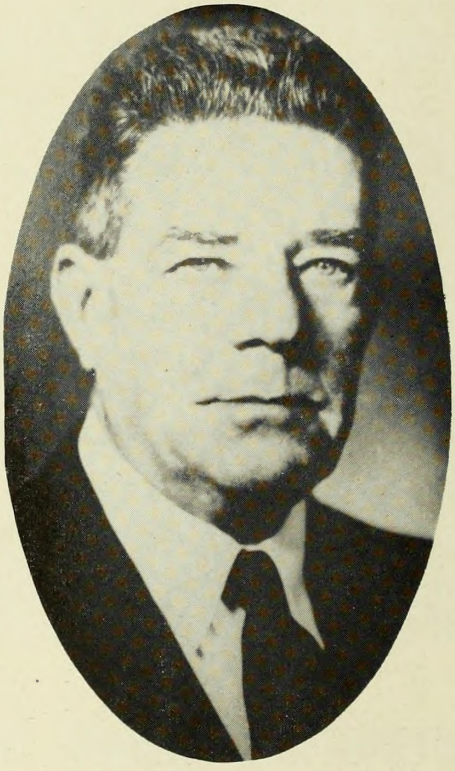
The committee of representatives from the Second Senatorial District and the State Highway Commission gave unanimous approval and named the bridge after the man who has fought so hard to develop the Southern Albemarle and Dare Coast region.

This new bridge will be an important link in connecting these two areas, and will this make US 64 a link between the Atlantic and Pacific Ocean, crossing the entire United States.

In naming the bridge after Warren, it is generally understood that it will be the first great public work of its kind in North Carolina to be named after a living person.

Warren, born in Washington, N. C. in 1889, is the son of Charles F. and Elizabeth (Blount) Warren. He attended Bingham School of Asheville from 1903 to 1906. After two years at the University of North Carolina and one year in Law School, Warren was admitted to the Bar in 1912. During a long political career, Warren's record includes: Chairman Beaufort County Democratic Executive Committee, 1912-1925; Trustee University of North Carolina, 1921-1925; Chairman Democratic State Convention, 1930 and 1934; temporary Chairman and Keynoter, 1938; delegate to Democratic National Convention, 1932 and 1940; State Senator in the General Assehbly, 1917, 1919 and 1959; President Pro Tempore of Senate, 1919; Representative of Beaufort County in the General Assembly of 1923; Member Congress from First Congressional District for 15 years, from 1925 until he resigned on October 31, 1940 to accept appointment as Comptroller General of the United States; served as Comptroller General of the United States 13½ years, retiring on May 1954 because of physical disability.

In promoting Eastern North Carolina Warren has done much for the progress of the area, gaining both national and historical recognition. In answer to



Lindsay C. Warren

the questions of cynical viewers of the coastal area, Warren said. . ." No other county in American can boast of the first English child being born on its soil. No other county in the United States can boast of the first airplane flight."

Warren, in 1926, invited Sir Esme Howard, the British Ambassador to speak at the celebration of Virginia Dare's birth. Fort Raleigh was then nothing but a wilderness, but 5,000 people turned out for the first grand scale celebration of the event. In 1927 Warren introduced a bill in Congress to create a memorial to the Wright Brothers, to be located on Kill Devil Hill. A program of getting up-to-date Coast Guard stations from the Virginia State Line to Ocracoke was begun. In 1937 a bill, introduced again by Warren, called for the creation of the Cape Hatteras National Seashore. Warren is one of three living men today who founded the Lost Colony, the other two being Paul Green, author of the drama, and R. Bruce Ethridge, veteran Dare County Legislator. At a crowd of over 7,500 people President Franklin Roosevelt, then attending a performance of the Lost Colony, announced he had signed the Warren Bill that day for the creation of Cape Hatteras National Seashore on Dare County soil.

Warren's long and varied political career, devoted both to his State and Nation is befittingly honored by a bridge linking another section of eastern North Carolina—a section which Warren was determined would grow.

DURHAM BY-PASS OPENED

A five mile section of Interstate 85 was opened to traffic Tuesday afternoon, December 12. Both lanes of US 70 (I-85) are having shoulder work completed under traffic.

The State Highway Commission reports all interchanges which connect with the duel-lane bypass also will be open to traffic.

Motorists have been using the eastbound lane two ways during the construction work on the westbound stretch, running from the intersection of US 70 and US 15 east of Durham to a point one mile west of Cole Mill Road, west of Durham.

Signing, fencing, seeding and shoulder work are being completed under traffic.

N. C. S. H. P. E. A. Association News

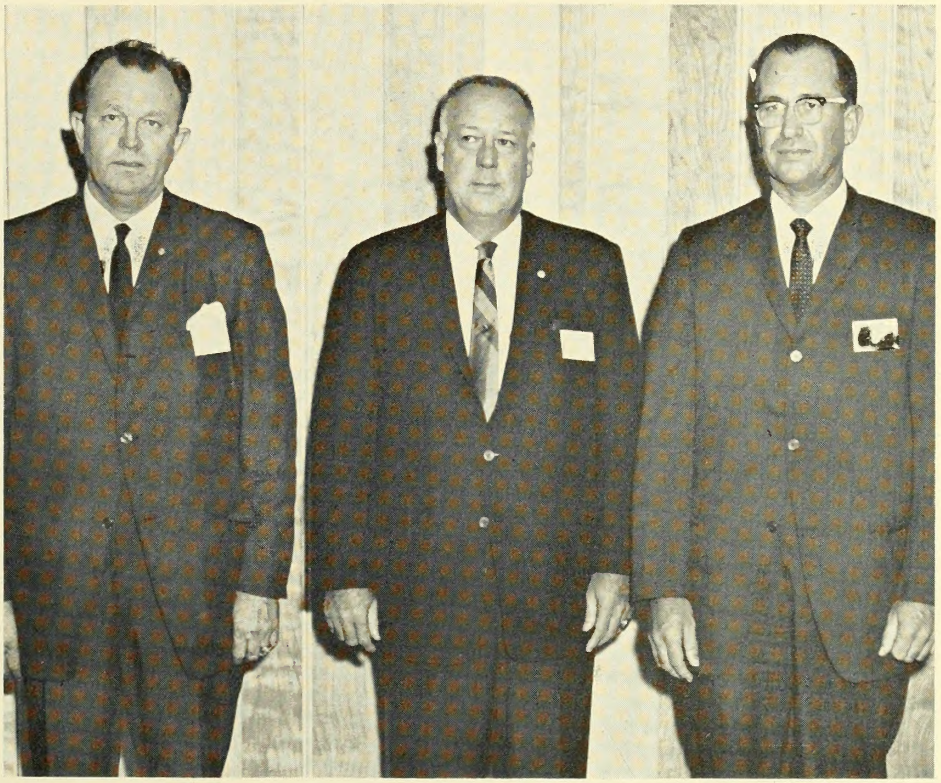
VOLUME 10—NUMBER 11 SEPTEMBER, 1961

1961 CONVENTION PICTURES — taken by our able photographer for ROADWAYS—Harold Powell. Harold was ably assisted by the "biggest little" photo aide in North Carolina, Danny Turner of Asheville. Danny was proud to be posed for a special picture in the lobby of the Jack Tar Durham Hotel with Imogene Coca, star of movies and TV who appeared in Durham during that ime.

BRIEF SUMMARY OF THE CONVENTION IN ACTION — with registration getting underway on Thursday morning, September 28, running thru the day with 188 official delegates being certified, plus their ladies, plus the committee members and officers. There were many guests registered also, and we finally had over 300 in the hotel as registered guests. Committee meetings began shortly after lunch, with the Resolutions Committee have a long session. the Finance Committee with its usual problems, and the General Executive Committee to hear reports and make plans for the main business sessions. The Nello L. Teer Company was host at a very fine dinner at their quarry that evening, given to the Association to honor its own guests, and with many other guests being invited by the Teer Company. Friday morning at 9:00 A.M., the Open Forum sessions began with various departments divided into groups for discussions of their own work problems on a State-wide level. The business session began promptly at 10:15 A.M. with a welcome by the Mayor of the City of Durham, and followed by the usual business of reports of committees and other pertinent matters. After lunch, the highlights of the day began with an address by the Chairman of the Highway Commission, Merrill Evans, who made a real "hit" with all those present. This was followed by an address by the Director of Prisons, George Randall, who was his usual fine self and in fine fettle. Roger Jackson, Public Relations Officer, was pinchhitter for Tarvia Jones in presenting the 1960 Safety Award Plaque to Division 12 for their outstanding record, and Roger made a real hit with the group. Business followed business until adjournment—then on to the refreshment hour given in our honor by ARMCO, then to the annual banquet. The real highlight of the evening was introduction of our principal speaker given by Merrill Evans, and the splendid address to us by the Governor, Hon. Terry Sanford. The cabaret dance that followed was enjoyed by all who attended, of course. Regardless of the "bedtime Stories" or the "bedtime hours" for our delegates, all were on hand promptly for business Saturday morning and all business was completed for resolutions—arguments pro and con. Chief Engineer Cam Lee made a fine address to the group on plans and developments being made by the Highway Commission. Election of the General Officers followed the report of the Nominating Committee, and unanimously elected were Layton Gunter as President, Ken Westwood as First Vice President, and James Saunders as Second Vice President. Past President K. R. Scott installed the officers in a very fine manner, and after the usual acceptance talks and presentation of gifts to the outgoing President, our Past President "Mike" Abernathy delivered a most wonderful Memorial Service for our departed members, with immediate adjournment following.

A WONDERFUL CONVENTION — constructive, beneficial, entertaining. May I say that Bob Turner of the Prison Department did an outstanding job in his presiding over this Sixteenth Annual Convention, faced many times with rather difficult situations which he handled with superb ability and with his usual diplomacy. We hope the results of this convention will be reflected in the future to the good of all our members.

Otis Banks, General Treasurer



Unanimously elected as General Officers of the North Carolina State Highway and Prison Employees Association are left to right: Layton Gunter, President; Ken Westwood, First Vice President; and James Saunders, Second Vice President.



N. C. S. H. P. E. A.





CONVENTION HIGHLIGHTS

Highway and Prison Employees throughout the State gathered in Durham for their annual convention, for three days of meetings, seminars, parties, dinners, and elections. A cross section of Convention highlights was photographed by ROADWAY photographer Harold Powell, and a summary of NCSHPEA news is included on the preceding page.



Roger R. Jackson, Jr., Public Relations Officer of the Highway Commission is shown pinchhitting for Tarvia Jones, Safety Engineer, at the presentation ceremonies of the Highway Safety Award. This year the award was won by the Twelfth Highway Division. Receiving the award is K. E. Manney, Assistant Division Engineer, and members of the Twelfth Division.

Convention—Sept. 28-30



Safety Engineer Tarvia Jones Retires

H. D. Tarvia Jones, Safety Engineer for the State Highway Commission since September of 1949, will retire December 31, 1961.

Jones, having reached the mandatory retirement age of 65, has achieved national recognition for his knowledge of safety methods. He designed the sign, "Safety Begins Here", seen at the entrance gates to all highway garages and repair shops in the 14 Divisions of the Highway Commission. He also designed and had approved the use of the black and yellow cross hatching caution paintings on the rear of all Highway Commission trucks.

Jones was first appointed to the Commission by the late W. Kerr Scott immediately after he became Governor. During his 12-year tenure, Jones has supervised safety training methods and projects throughout the State and has taught the American Red Cross Standard and Advanced First Aid Courses, and has awarded certificates to over 6,000 graduates of the courses.

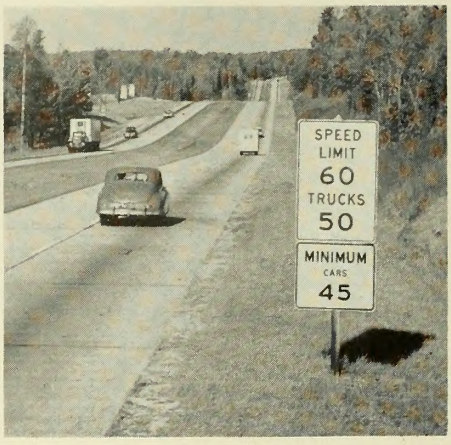
In 1958, the Award of Honor was presented to the Commission by the National Safety Council and in 1960, the Award of Merit was received. The efforts of Mr. Jones in teaching safety among the Commission personnel were largely responsible for the receipt of these two awards.

Jones has held many positions on the national level in safety promotion organizations. He is Past General Chairman of the Public Employees Section of the National Safety Council. He helped to organize this group in 1950. He has appeared as a panelist in many forums sponsored for national attention to safety methods and first-aid procedures.

Jones, a graduate in Civil Engineering from Virginia Polytechnic Institute, is Past President of the North Carolina Society of Engineers, and Past President of the North Carolina Society of Safety Engineers. He is presently a Director of the National Veterans of Safety Organization.

(Continued on page 10)

SPEED LIMIT 45 MPH



Minimum speed signs such as the one above are being posted on North Carolina highways to aid even traffic flow. (Photo courtesy Harold Powell).

RALEIGH—The State Highway Commission opened a major section of I-85 to traffic on October 14. The completed section runs from a point approximately 3 miles west of Durham for 10.6 miles to a point about 1 mile south of Efland.

Also announced was the scheduled opening to traffic of I-85 running 11.2 miles east of Greensboro sometime in November. The major objective of highway officials is to provide motorists 4-lane divided highway service from Durham to Greensboro during the winter months.

United Fund

Employees in the Highway Building, Laboratory, Equipment Depot and District Shop led all State agencies in and around Capitol Square in total dollars pledged and contributed towards the United Fund.

From an estimated 857 employees, 750 contributions were made, at a total of $5,458.10. This sum equals 129 percent of last years total!

REVISION

THE DRAFTSMAN AND THE ENGINEER

ARE MEN OF SKILL AND VISION

AT LEAST THEY ARE UNTIL THEY HEAR

THAT HATED WORD: REVISION!

* * *

THE ENGINEER WITH PRACTICED EYE

SURVEYS HIS GRAND DESIGN

THE DRAFTSMAN THEN EXPERTLY DRAWS

EACH COMPLICATED LINE.

* * *

"COMPLETE!" THEY SIGH CONTENTEDLY

"MIRACULOUS PRECISION!"

OH OPTIMISTS! TOMORROW BRINGS

CATASTROPHE . . . . REVISION!

* * *

REVISION ONE ADDS THIS NEW PIECE

REVISION TWO IMPROVES IT

REVISION THREE MAKES IT JUST RIGHT

THEN NUMBER FOUR REMOVES IT!

* * *

YOU CAN'T DO THIS, YOU CAN'T DO THAT

WE'LL WAIT FOR A DECISION

BUT IN THE MEANTIME, JUST REVISE

THAT LAST REVISED REVISION.

* * *

REVISE . . . REVISE . . . THE VERY WORD

FILLS ENGINEERS WITH DREAD

THOUGH DIE THEY MUST, THEY'LL BE REVISED

TO MAKE DAMNED SURE THEY'RE DEAD.

* * *

WE HOPE THAT GOD'S NO ENGINEER

WHEN HE MAKES HIS DECISION

IF ONCE THEY WIN THEIR WINGS THEY HOPE

THERE'LL BE NO LAST REVISION!

(Author Unknown)

North-South Route Extended

FIFTY ONE MILES ADDED TO U. S. HIGHWAY 13

A southwesterly extension of US 13, now a principal north-south foute through Newton Grove, will enable motorists to travel the Interstate Route I-95 through Fayetteville and Lumberton, and it will give the traveling public a greater choice of trips from the north and south.

This extension, in effect, connects Fayetteville, Goldsboro and Greenville with Norfolk where the $200 million Chesapeake Bay Tunnel project is now under construction.

Eastward across the bay from Norfolk, US 13 follows the Eastern Shore of Virginia and Maryland northward into the Wilmington, Delaware and Philadelphia areas.

The Federal Route extends southward from Norfolk through Suffolk and across the Virginia-North Carolina line into Gates County.

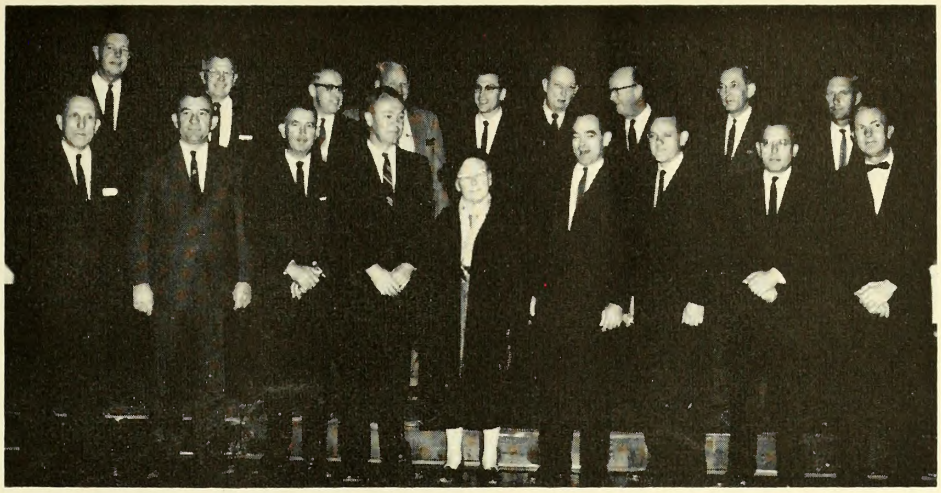
The highway crosses the Chowan River at Winton, then passes through Ahoskie, Windsor, Williamston, Robersonville, Bethel, Greenville, Farmville, Snow Hill and Goldsboro.

Official action on requests for initiating US routes or for extension of them is taken by the American Association of State Highway Officials. Final approval of this group for the US 13 extension was announced by the State Highway Commission November 2.

SASHO

(Continued from inside front cover)

Other Highway officials attending from North Carolina were: Ivan Hardesty, Assistant Chief Engineer; Roger R. Jackson, Jr., Public Information Officer; J. S. Burch, State Planning Engineer; J. L. Norris, State Hydrographic Engineer; John Davis, State Construction Engineer; R. W. McGowan; Assistant Chief Engineer-Location; F. L. Hutchison. Division Fourteen Engineer; L. H. Gunter, State Maintenance Engineer; Merle T. Adkins, Division Five Engineer; and James Lacy, Bureau of Public Roads.



Attending the Asheville Public Hearing on October 27 were, front row, left to right: Sen. Clyde M. Roberts, Marshall; Rep. Jack Felmet, Waynesville; John T. Randall, Hendersonville; Rep. Liston B. Ramsey, Marshill; Mrs. Elinor C. Cook, Franklin; Rep. J. Thurston Arledge, Tryon; Rep. Jack Slagle, Spruce Pine; Rep. Jack H. Potts, Brevard; and Rep. Harlon Holcombe, Burnsville.

Back row left to right: Sen James G. Stikeleather, Asheville; Sen Benjamin H. Summer, Rutherfordton; Rep. Gordon Greenwood, Black Mountain; Rep. W. W. Wall, Marion; Rep Lacy Thornburg, Sylva; Rep John Y. Jordan, Jr., Asheville; Sen. Boyce Whitmire, Hendersonville; Rep. I. C. Crawford, Asheville; and Rep. Mack Isaac, Newland. (Photo courtesy of Bill Hood).

Commission Meeting In Western North Carolina

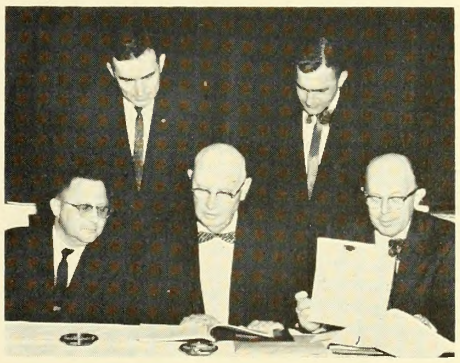
Continuing a program to see North Carolina road needs "first hand", the 19-member State Highway Commission launched a second phase of its Statewide tour.

On October 27, the Commission held its regular monthly meeting in Asheville together with a western North Carolina public hearing and road tour.

Among topics included at the Commission meeting was a tightening up policy on the completion of road work, and a re-emphasis on the necessity of satisfactory progress on road improvement projects.

Over 1,000 spectators, civic leaders and legislators gathered at the Asheville City Auditorium to hear Commission Chairman Merrill Evans total up over $76 million in Western North Carolina projects under contract or proposed for Primary, Secondary, and Interstate Highways. In his summary of road improvements, Evans assured Western residents that the Commission was earnestly working towards the best possible answer for their road needs, and pledged on behalf of the Commission that it would "do everything in (its) power

(Continued on inside back cover)



Checking the Commission Agenda during the meeting are left to right: W. H. Babcock, Director State Highway Commission; C. W. Lee, Chief Engineer; Yates Bennett, Commissioner; Roger R. Jackson, Jr., Public Information Officer; and Merrill Evans, Chairman, State Highway Commission.

New Department

In the spring of 1958, the State Highway Commissioners requested a study of the possibility of establishing a photogrammetric section. The results of this study conducted by R. W. McGowan, showed that such a section was both possible and feasible. The new section was established within the Location Department in October 1958. The Photogrammetric Section was headed by Edgar J. Page, a veteran of twenty-three years in the science of photogrammetry. Mr. Page had as his assistant, Chester Gray, formerly with the Florida State Highway Commission and Fairchild Aerial Surveys. By March, the section was in operation with William Hood, Jr., Photo Lab Supervisor from Ohio; John McDonald, stereo-compiler from TVA, Chattanooga, Tennessee; Frank James, chief of surveys, from Florida State Highway Commission; and Dick Pawlikowski, draftsman from Florida State Highway Commission.

Originally set up in a cubby hole in the present Photolab, the section soon expanded into the building between the Art Museum and the Motor Pool. After County Maps moved into its present location, the photogrammetric section moved into the renovated wing, where it has proceeded to grow and expand. Under the guidance, interest and untiring efforts of Lloyd Cook, State Locating Engineer, the section has grown from its small beginning until it became a fulfledged department on October 21, with over 30 members on its staff.

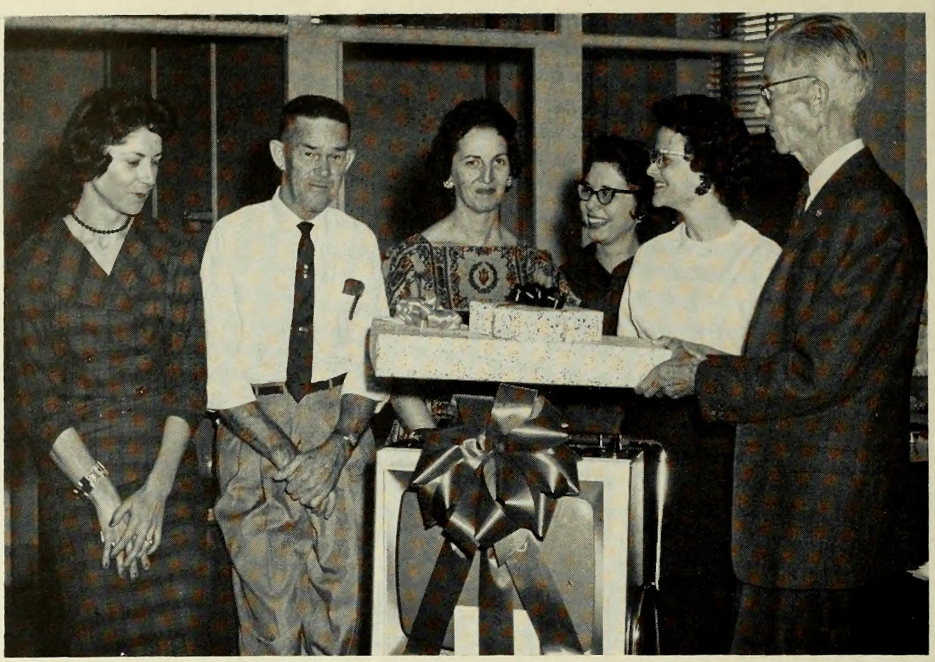
JONES

(Continued from page 8)

Jones is a veteran of World War I and fought with the Twenty-ninth Division, called the old "Blue and Gray." He is Past National Commander of this combat group.

A native of Salem, Virginia, Jones now resides in Graham, N. C. He is a member of the First Presbyterian Church of Graham, where he has served as general Superintendent of Sunday School for 14 years and as a Deacon.

Governor Terry Sanford and Highway Commission Chairman Merrill Evans were high in their praise of Jones for the splendid record he has attained as Safety Engineer for the North Carolina State Highway Commission.



Retired highway official, H. K. Witherspoon is shown presenting Cecil Stearns, 40-year highway employee, several gifts from co-workers and friends upon Stearns' retirement September 29. Pictured left to right: Becky Holden, Stearns, Irene Whitley, Nancy Biggers, Jo Ann Vaugh and Witherspoon.

SCHEDULES AND FARES FOR FERRY SERVICE TO NORTH CAROLINA'S OUTER BANKS are now available for motorists heading for eastern Carolina. This edition for **FALL** and **WINTER** 1961-1962, includes the following ferry services: Alligator River; Oregon Inlet; Hatteras Inlet; and the Atlantic-Ocracoke Toll Ferry. Also listed are the fares and rates applicable to vehicles and passengers.

Anyone wishing a copy of this schedule is advised to write:

PUBLIC RELATIONS DEPARTMENT

STATE HIGHWAY COMMISSION

RALEIGH, N. C.

"I understand cars won't run over you if you carry a light while crossing streets at night" a visiting tourists remarked.

"That right", answered a local yokel, watching cars zoom by, "but a lot depends on how fast you carry it across".

The Church of England has proposed a new car accesory—a "thank you" sign which could be lighted at the touch of a button. Sponsors say drivers use horns, lights and the car itself to show discourtesy. Courteous acts could be acknowledged by punching the "thank you" button.

Cecil Stearns Retires

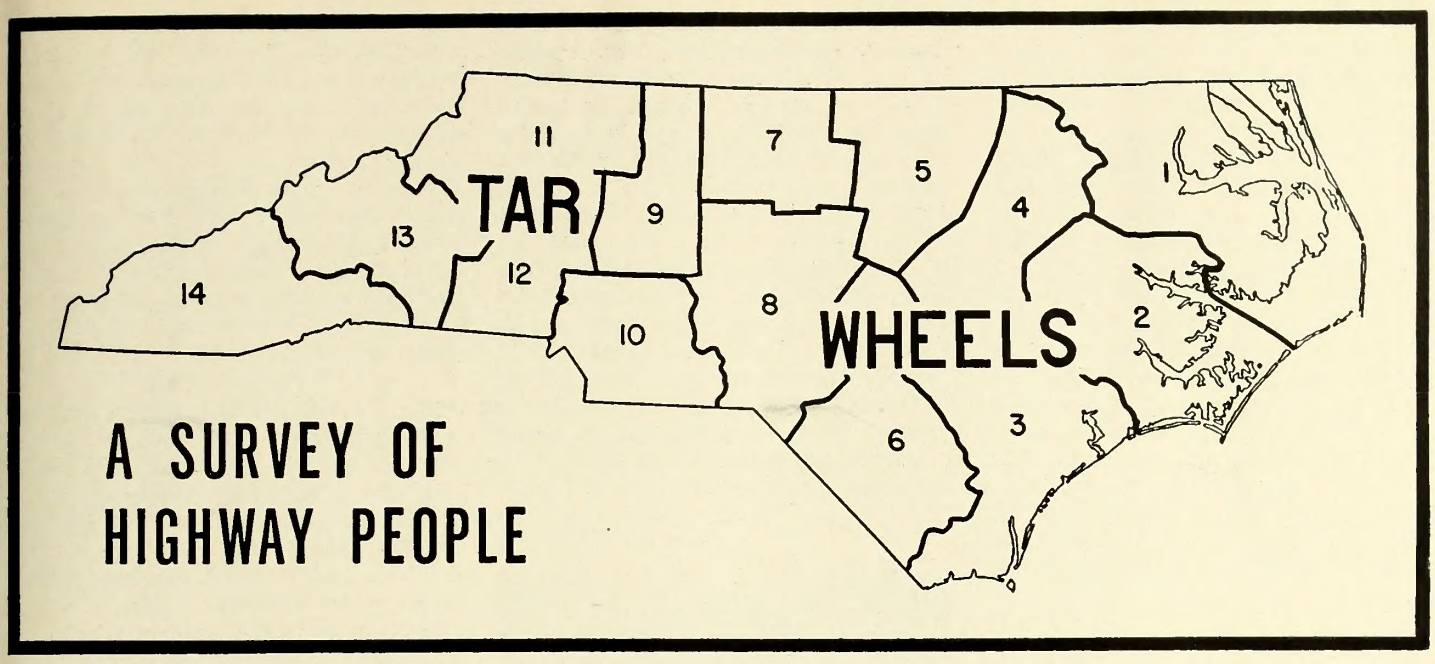
After 40 years of loyal and efficient service with the State Highway Commission, Cecil Stearns, an Accountant and Supervisor of the Payroll Section in Finance, retired September 29, 1961.

Fellow employees and friends all gathered together on Stearns last work day to show their esteem by presenting him with several fine gifts. A long-time friend and retired highway official, H. K. Witherspoon, gave a brief talk and made the presentation, which included a lovely portable TV set, a pair of waders for fishing and a nice plaid jacket.

Stearns, a native of Brewer, Maine, is married to the former Miss Marthe Laprand of Paris, France, whom he met while serving with the U. S. Army in France during World War I. They have three children Raymond, Jeanne (now Mrs. Robert F. Nardiello of Long Island, New York) and Cecil.

He lists as his hobbies, fishing, hunting and boating-all of which he is lookng forward to enjoying during his retirement.

A member of the Tabernacle Baptist Church, Stearns resides with his wife at 2214 St. Mary's Street.



A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

PHOTOGRAMMETRY—Flying season has returned and with is comes *Charles Watson*. Charlie, our former aerial photographer, is helping out in the photo lab between classes at State. New faces in the Department are *Charles Tate*, *James Pait*, draftsmen; *Mearl Meekins*, *Ed Berry*, stereo-compilers; and *Gordon Deans*, photo lab technician. Charles is from Wilmington and Jimmy is from Charlotte. Both are students at State. Mearl is from Manteo and is a graduate of E.C.C. with a cartography major. Ed, a Durham native, comes from the Aeronautical Chart and Information Center in St. Louis where he was an aerial intelligence specialist and cartographer. Gordon, a Raleighite formerly worked at Fincolor Photofinishers. *Pete Marchetti* met his parents in New York City on Nov. 15, when they docked as passengers on the Leonardo De Vinci. The Marchettis have returned from a nine-month tour of Europe. *Bob Moore* and *Wayne Robey* traveled to Miami, Florida with their parents. Congratulations to the *Bill Vidauds* upon the birth of a daughter, Maria Elena. Bill was doubly thrilled to have a visit from his mother and his wife's father from Havana, Cuba. *Carl Dempsey* is the proud holder of several trophies from his championship shooting with the Sir Walter Gun Club for small bore club champion in the recent meet. We all miss *Jimmy Wallace*, photo lab technician, who reported to Fort George Meade, Maryland on Oct. 28. Jimmy is with the 111th Signal Bn. as a photographer.

DIRECTOR'S OFFICE—*Mr. and Mrs. W. F. Babcock* attended the AGC Convention Nov. 5-8 at the Greenbriar Hotel in White Sulphur Springs, West Virginia, where Director Babcock delivered an address. An early recovery is wished *Nancy Hall's* mother, who is ill in Watts Hospital, Durham.

PERSONNEL—*Dot Medlin* enjoyed a recent week-end vacation in Washington, D. C. Welcome to *Carolyn Weber*, new steno in Personnel, who replaces Barbara Springle. It's nice to have *Sue Davis* of Wake Forest as a temporary addition to the clerical staff.

LANDSCAPE—*J. A. Saunders*, Area Landscape Engineer, and *F. H. Bowen*, Landscape Designer, attended the Ohio Short Course on Roadside Development at Columbus, Ohio, October 4-8. Mr. Saunders participated in one session of the program, reporting on highway landscape development work in North Carolina.

BRIDGE — *Paul Burton* is a new trainee. Congratulations to the *Harmon Byrds* upon the birth of a daughter, Lee Suzanne Byrd, October 23. Late vacationists: *Gerald Stone* and family visited relatives in Houston, Texas. *Ken Creech* took his family to Doughton Park along the Blue Ridge Parkway. *Dave Sutton* and family motored to Atlanta to visit relatives. The boys in *Arthur Barnett's* squad won't talk about a recent fishing trip they took. Didn't the fish bite, boys? *J. A. Morrison* recently transferred from Permit to Road Design. *Mr. and Mrs. Chester Calhoun* announce the arrival of a son, Craig Scott, on Nov. 2, 1961. *Fred W. Habel*, former employee of the Bridge Dept. has returned to work on a permanent basis with Bridge Location.

CONSTRUCTION—Best wishes to *Barbara Williams* who was married Thanksgiving Day to Jimmy Paul Clapp in the Johnston Union Church in Smithfield. The bride is the daughter of Mr. and Mrs. Willis Gilbert Williams of Smithfield and the bridegroom is the son of Mrs. Maybelle Youngblood and the late Mr. Clapp of Clinton, Oklahoma. He is employed with the Aeroglide Corporation. The couple will live in Raleigh.

PLANNING—Congratulations to *Jim Zook* who married Judy Ray in the Cary Baptist Church on October 21. After a wedding trip to Florida and Jamaica, B. W. I., the couple will reside on Fairway Drive in Raleigh.

PURCHASING — Welcome to *John Raoul Maynard* of Cary, who recently joined the Department. *Marjorie Rose*, temporary summer employee, is now a permanent employee in the File Room. *Leona Sidbury* and her husband vacationed in Miami, Florida for a week during Thanksgiving, where they visited her sister.

ROADWAY DESIGN—*John Birdsall* flew his plane to La Grange, Georgia to visit his parents on October 14 and took *Larry McCarson* along for the ride. They returned October 16 in time to fly with the Civil Air Patrol on a Search Mission for a missing B-52. October vacationists were: *Mr. and Mrs. James R. Moore*, West Virginia, to see relatives; the *George Hollands*, Asheville, to visit friends; *William Barkley* and family, New Orleans, with relatives; and the *Richard Turners*, a week-end trip to the North Carolina and Virginia mountains. Nags Head was the scene of a November vacation for *Mr. and Mrs. James R. Moore*. Congratulations to the *Edwin A. Westmorelands* upon the birth of a son. David Trent, October 18; and to *Mr. and Mrs. William V. Young, Jr.*, who announce the birth of a daughter, Deborah Lynn, Oct. 19.

New faces in the Department are *Alton T. Alligood, Jr., James C. Blackman, William A. Garrett, Jr., Phillip A. Heffner, Larry J. McCarson, Luther H. Taylor, James O. Morrison, Robert M. Rupert* and *James Perkins*. Welcome to all of you! *Randy Chandler* went to New York City for a week in October and enjoyed sightseeing, the gay night life and a special highlight was going to see Tammy Grimes in the "Unsinkable Molly Brown."

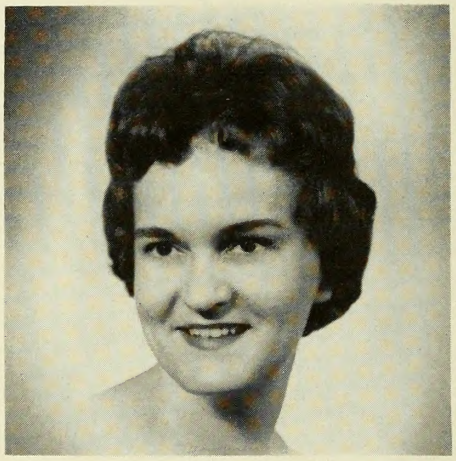
SAFETY—Engineer *Tarvia Jones* recently gave an address on Safety in Peach Tree, for highway personnel in Graham, Cherokee and Clay Counties, A highlight of the meeting was the presentation of a life-saving merit award to *Wayne McClung* of Robbinsville by Engineer Jones. In 1958, *Gum Shepherd* of Albemarle was the first to receive this coveted award.

TRAFFIC—*Pete Deaver* is mighty proud of his nice home which he moved into recently.

CHIEF ENGINEER'S OFFICE—*C. W. Lee* attended the AGC Convention at the Greenbriar Hotel in White Sulphur Springs, West Virginia, Nov. 5-8.

ADVANCE PLANNING—Welcome to *Mrs. Edna Mohorn*, new Steno II in the Department. *Carolyn Beck* recently spent a weekend in Baltimore, Maryland, visiting her sister. Congratulations to the *R. J. Kimleys* upon the birth November 7 of a new baby girl, Geraldine Patricia, in Rex Hospital.

MATERIALS & TESTS—*Mr. and Mrs. Charles G. Jackson* have returned from a week's vacation in New York. It's nice to have *Alma Cone* back at work after a leave of absence. Congratulations to *Atlas Buffaloe* and his new bride. They were married Oct. 15 at the Cary Baptist Church. Welcome to *W. R. Richardson, N. W. Northcott, Hermus G. Leonard* and *E. D. Richardson*, all new employees. W. R. Richardson is with Prestress Concrete; Northcott is in the Soils Lab; Leonard is in the office; and E. D. Richardson is with the BPR Records Section. *J. E. Thompson*, State Materials Engineer, became a proud grandfather on Aug. 28, when a fine baby boy was born to his son and daughter-in-law the Irving Thompsons in Greensboro.



Mr. and Mrs. James Spencer Shelton of Yanceyville announce the engagment of their daughter, Betsy Poteat Shelton, to Klink Woodworth Cook, Jr., of Charlotte, son of Mrs. Klink Woodworth Cook of Montgomery, Alabama and the late Mr. Cook.

The wedding will take place Saturday, December 16, in Prospect Methodist Church in Yanceyville. The bride-elect attended East Carolina College in Greenville, and King's Business College in Greensboro. She is a secretary in the Personnel Department. Mr. Cook graduated from Huntingdon College in Montgomery, where he was a member of Phi Kappa Alpha social fraternity. The couple will reside in Charlotte where Mr. Cook is Bureau Manager for United Press International.

RIGHT OF WAY—*Judy Holder* spent a week of her two-week honeymoon in Blue Ridge Mountains. That happy look on *Rose Ann Harris'* face is due to the sparkler on her third finger, left hand. Rose Ann and her fiance, Raeford Moore of Four Oaks, plan a March wedding. Does *Harold Davis* know Raeford has a sister? *Eleanor Brantley* and her two sisters will sing and dance in the Kiwanis Minstrel. Recenty, *John Fields, Harold Cameron, Harold Davis, Reece Shelly, Warner Powell, Collis Lewis, Brantly Murray*, and *Bill Hardison* went on an all-day deep sea fishing trip at Morehead. They brought in 70 pounds of fish without too much help from *Harold Davis*, who had a case of sea-sickness. Later on in the season, the Right of Way boys had a stag fish fry.

Is it a coincidence that *Bill Tomlinson* came up with a sudden ailment during the Right of Way Golf Tournament? We hear the competition was quite stiff. Paula Diane is the new addition to *Brantly Murray's* family. The count is now four. *A. Z. Williams*, cub master, had charge of the November 3 pack meeting with 250 parents and teachers attending. Who has been seen driving around in a black thunderbird recently, *Collis Lewis?* Right of Way held a golf tournament at Wild Wood Golf Course Sept. 14 and 21. Champion of the event was *Bill Moon* with *Andy Walker*, the runner-up. Next year the tournament will be held on a State-wide basis, and the winners from the 14 Divisions will come to Raleigh for the final play-off for the championship cup, which will be on display in the Right of Way Office.

LOCATION—*Frances Smith* and children spent a recent weekend in Morehead City with friends. Frances was thrilled to catch a 15-lb. Albacore while deep sea fishing. *Louise High* and her husband have been traveling to various towns to watch the football games of Brounghton High. Their son, Billy, is a tackle on the varsity team at Broughton, Department Head *Lloyd Cook* was recently honored on his birthday, when employees surprised him with a three-tiered Lady Baltimore birthday cake baked by *Gwyn Hester*, new addition to the staff. Gwyn transferred from photogrammetry. The Property Survey Division has several new employees. *Thomas Brown*, after a brief stay in Florida, is now working in the division. He was formerly with Photogrammetry. *Phillip Dixon* and *Jim Glasgow* are new additions to the survey parties. *Floyd Suitt* has transferred to Property Survey from Winston-Salem. Congratulations to *Mr.* and *Mrs. Marvin S. Cavanaugh* who are the proud parents of a new baby girl, Susan Kimberly, born Nov. 1. Sunny Florida was the honeymoon destination of Jimmy Duncan and Judy Allen after

their Nov. 18 wedding. Jimmy is the son of Mr. and Mrs. *J. D. Duncan* and Judy is the daughter of Mr. and Mrs. A. V. Allen of Raleigh.

DIVISION ONE

By ROY E. WEST

Division Correspondent

FIFTY-TWO people from Ahoskie attended the North Carolina Day and the Philadelphia Eagles and Washington Red Skins game in Washington, D. C. on October 29. Among those travelling Tar Heels were *T. C. Liverman*, District 2 Engineer and *M. C. Newbern*, District 2 Mechanic.

RECENTLY MARRIED are the *Joe Devenports* who are making their home in Manteo. Davenport is Bridge Tender on the Roanoke Sound Bridge, Mrs. Davenport is the former Mrs. Maudell Taylor of New Bern.

ON THE SICK LIST: *M. L. Farrow; George K. Mack; E. L. Doxey; Eugene Allsbrook; Mrs. Mildred Peele* and Mrs. Julian Pritchard, wife of *Julian Pritchard*, Maintenance Foreman I.

RECENT VACATIONERS were: *Lee Perry*, Right of Way aid, in Bailey; Mrs *Nedra Vanderberry*, Stenographer in District 2, in Chapel Hill; Road Maintenance Supervisor *R. L. Vinson* and his wife went to visit relatives in Hampton, Va.; and *Raymond Conner*, Right of Way Agent at Durham.

LIVING IN FLORIDA these days is Yates Jordan, retired District Mechanic of Elizabeth City. He is now residing in Orlando.

BABY NEWS: *W. H. Mosley* is proud of his new grandson born October 20, to Mr. and Mrs. Willie Chamblee; Mr. and Mrs. *Howard Norville* announce the birth of a son on October 9. Norville was employed in the Division Office.

CONDOLENCES are extended to: the family of *J. L. Harris, Sr.*, truck driver at Stumpy Point who died after a short illness October 3; *J. L. Harris, Jr.* who died after a short illness on September 22; and to *Obie Williford*, Sign Helper, on the loss of his brother, Vandy Williford.

DIVISION TWO

By ROY D. FRANKS

Division Correspondent

SEVERAL Division employees left for weekend vacations to enjoy events throughout Carolina. In Charlotte for the Industrial Trade Fair were Mrs. *Iris Sutton* and her son. While there they also attended the National 400. The State Fair in Raleigh was a weekend highlight for *C. L. Pollard* and his wife. Spending a week in the Virginia mountains was *Hazel L. Baker*, secretary in the Division Office.

DEER HUNTERS this season were: *J. Q. Adams* and *Earl T. Bender* at Catfish Lake; *L. F. Howell* and *Elmer Sutton*.

FISHERMAN *Heber Gray* went to Ho Ho Villiage for a weekend and came back talking about "the big one that got away!"

CELEBRATING their 20th wedding anniversary October 8 were Mr. and Mrs. *Robert A. Merritt*.

IN SERVICE training school members who received certificates are: *Rufus J. Allen, Jr.*, H. E. II; *J. B. Dawson*, H. I. II; *J. B. Newman*, E. A. II; and *J. K. Smith*, H. I. II. The school, held in Greenville was taught by *C. L. Haislip*, District Engineer.

SYMPATHY is extended to: the family of *Frank Taylor*, Jr., M. O. I. in District I, who was accidently killed October 15; and to *Lloyd Wilson*, Inspector in Construction, in the death of his Mother.

LENOIR COUNTY was the location of the monthly safety meeting. At the Kinston Maintenance Yard *J. Q. Adams* presented Certificates to the employees who completed the Equipment Operation and Care-School.

FIRST AID instructors for the Lenoir County Chapter of the American Red Cross are *J. B. Dawson* and *M. E. Newman*. They also operated the First Aid Booth at the Lenoir County Fair in Kinston on October 20.

DIVISION THREE

By IRENE HEWETT

Division Correspondent

ABOARD the Battleship U.S.S. North Carolina when it arrived in Wilmington was *Tommie Preston*, and alongside, on a minesweeper, was *John Naylor*, both of Construction. Naylor and Preston are both reservisits and were on special assignment when the battleship "came home".

VISITING the Division Office recently were *Withers Davis* from Fayetteville and *Blount Whiteside* of Clinton, retired District Two Engineer.

DIVISION ENGINEER *T. J. McKim* has a new granddaughter, and he has recently bought a new home (to lure the young Miss into longer visits with her Grandad no doubt!). Congratulations on both!



COLLEGE FRESHMAN Ann Harper Williams is attending Montreat-Anderson College in the Blue Ridge Mountains. Ann, who graduated from Roseboro-Salemburg High School last May, is the daughter of Charles Williams, Maintenance Department in Sampson County.

ON THE JOB after recent illnesses are *Bill Lumsden; Ivey D. Pridgen; William Z. Bryan*; and *H. H. Watkins*.

ASSOCIATION NEWS: The Construction-Division Office Chapter held their

quarterly meeting on Friday, October 13 at Neptune Restaurant at Wrightsville Beach. The New Hanover Chapter held their barbecue supper meeting on October 20 Guests included *Otis Banks*, Executive Secretary; *W. G. Reaves* of Raleigh and *J. A. Saunders*, newly elected second vice president of the Association.

RETIRED DIVISION ENGINEER *C. E. Brown* and his family recently visited relatives in Gaffney, S. C.

IT'S A GIRL! *Bob* and Georgia *Trevathan* are proud to announce the birth of a daughter, Cynthia Gail, born October 18, and weighing 9 lbs., 7 ounces. The Trevathans also have a boy, "Rocky", sixteen months old.

WELCOME to *Joe McArthur* to the Right of Way Department. "Pat", his wife, and three children are from Wakulla, N. C.

SORRY to hear that *Charles Odum* and *Charles Boone* have both left the Division. Odum resigned because of health reasons and Boone went on Disability Retirement this fall.

WE WERE DELIGHTED to hear from *Irene Worley* recently. Irene was formerly secretary in the Right of Way Department, and now she is living with her family in Jacksonville, Florida where she is working for Atlantic Coast Line.

DIVISION FOUR

By MRS. JERRY BOYKIN

Division Correspondent

GET WELL WISHES go out to *Milton Bradley*, who underwent surgery; *Cicero Nethery, Jr.*, hospitalized in Galax, Va.; *W. F. Taylor* in Edgecomb General Hospital, Tarboro; *R. G. Manning* at Park View Hospital, Rocky Mount; Mrs. Lena Jenkins, wife of *R. G. Jenkins*, at Roanoke Rapids Hospital.

RECOVERING after recent illnesses are: *Irving L. Wooten;* Mrs. Thelma Warren, wife of *W. O. Warren; W. L. Mosley;* and *A. L. Morris.*

CONGRATULATIONS to Mr. and Mrs. *Preston Lane* upon the birth of a son, Phillip Anthony, born October 29 in Roanoke Rapids Hospital. The Lanes have one daughter, Debby.

DIVISION FIVE

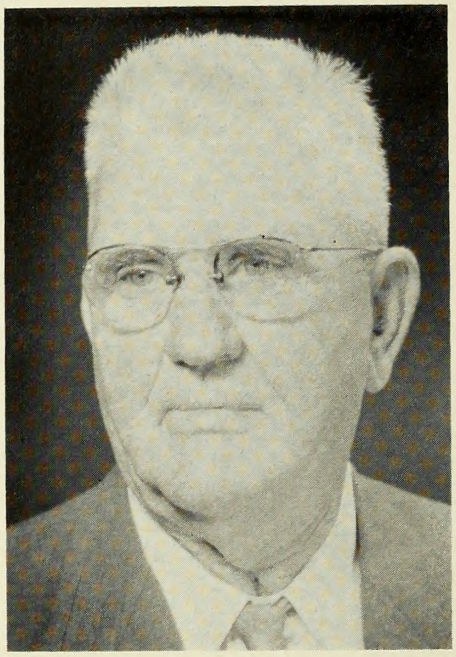
By PEGGY BRIGHT

Division Correspondent

SYMPATHY is extended to *J. W. Jenkins* who retired last summer upon the death of his wife, Sarah, who had been ill for several months.

EMPLOYEES who took time for resting and relaxing are *M. A. Ellington, W. B. Grady, Bruce Hockaday, Howard Riggan* and *Clarence P. Wilson.*

ON THE SICK LIST recently were: *W. C. Fowler, H. E. Hicks,* and *F. W. Laws.*



MAJOR POPE POWELL retired on September 30, after 30 years with the Maintenance Department of the State Highway Commission. He began work with the Commission in 1922, serving as Section Foreman, Gang Foreman, and for the past 11 years has been Road Maintenance Supervisor of Warren County. Powell is married to the former Gladys Hull, and they have three children, Major Pope Powell, Jr., Roy, and John Gaylord.

IN DURHAM for the Association Convention were *Giles Crutcher,* Unit Officer, and *Henry Hicks,* Granville County delegate.

DEEPEST SYMPATHY is extended to *L. W. Clay* upon the death of his brother.

HOSPITAL ROOMMATES were *H. L. Henley* and *Vencen V. Morton.* Both are reported to be recovering rapidly.

AMONG THE VACATIONERS were *G. J. Brogden* and *H. R. Hicks.*

DIVISION SIX

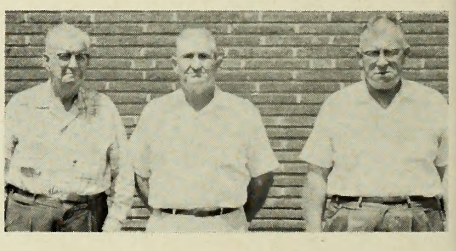
By STEPHEN AMMONS

Division Correspondent

MAINTENANCE FOREMAN WILLIAM K. EVERITT retired from the Highway Commission after 25 years. In 1917 Everitt began his career under Maintenance Supervisor Dan Davis, as a Section Foreman. In 1918 World War I interrupted his work, and he left to serve in France. The following year Everitt returned to continue his work with the county and State up to 1937. He returned to the Highway Commission in 1956 and remained as Maintenance Foreman with the Sixth Division. Everitt is married to the former Nellie Bly Culbreth and they live at Stedman, N. C.

L. L. REECE seems pleased with the new 118 Galion Motor Grader which was issued to him recently.

RUSSELL S. TAYLOR, Maintenance Foreman in Harnett County, died August 15. A native of Bladen County, Taylor began working with the Highway Commission in 1920 and held positions as Section Foreman, Gang Foreman, and Maintenance Foreman. Employees of the Sixth Division joins with friends of the Highway Commission in extending sympathy to Mrs. Taylor, her son, and three daughters.



35 YEAR AWARD WINNERS from the Sixth Division are, left to right: A. T. Hight, L. J. Carter, and R. N. Weaver. Congratulations.



THE CAPPING CEREMONY for Henrietta F. Edwards is a rewarding experience after long hours of work and study. The ceremony took place at Highsmith Memorial Hospital, Fayetteville. Friends of Henrietta's father, W. H. Edwards, Equipment Dept., join in wishing her every success in her new career.

DIVISION SEVEN

By P. L. WELCH

Division Correspondent

FLORIDA visitors in the fall were *Roy S. Thomas* and his wife, who toured the Sunshine State from Silver Springs to Miami Beach. They visited the Ringling Museum in Sarasota and the famous Mansion, and saw the Bock Tower at Cypress Gardens.

WELCOME BACK to *Harvey Boyette*, who has been out of the office with mumps. Boyette is with the Right of Way Department.

ANNOUNCING Miss Kris Michelle White! District Engineer *W. W. White* is the proud Grandfather of the Little Miss Born October 5. Her Parents are Mr. and Mrs. W. W. White, Jr., of Clearwater, Florida.

BACK AT WORK after an extended illness is *L. M. Collins*, Machine Operator 3 in Rockingham County.

VACATIONERS were: *L. R. Reece* and family at the mountains; *Herbert Meyers* visiting Santee Cooper, S. C.; *Rex Joyce* fishing off the N. C. coast; and *W. W. White*, *O. N. Alley*, *J. C. Martin* and *H. W. Joyce* fishing at Long Beach.

ROCKINGHAM COUNTY employee, *Shelby Wilson*, M. O. 3, submitted his resignation on September 15, Wilson had been employed in the Maintenance Department since 1943.

TRAINING with the National Guard at their Officer's School in Fort Eustis is *D. E. Beach*, Division Right of Way Agent.

DIVISION EIGHT

By VIRGINIA WILLIAMSON

Division Correspondent

MEMBERSHIP in the State Highway and Prison Employees' Association again totals 100% for the Prison Department. Those attending the Association Convention in Durham were: *J. W. McInnis; Douglas Patrick; Elbert Hardy; R. L. Silver; O. M. Smith; W. T. Alcon; J. L. Odom; J. R. Floyd;* Mr. andMrs. *R. E. Thomas;* Mr. *John Hall; Bob Roberson; Virginia S. Williamson; Iva May Teague; T. C. Johnston; C. M. Jackson; E. C. Darden;* and *Bill Grant.*

SYMPATHY is extended to the family of *James Wilton Powers*, Moore County Employee, upon his death at Veteran's Hospital in Fayetteville on October 14.

FELLOW EMPLOYEES of *E. T. Brame* wish to express sympathy to him upon the death of his brother, October 20.

WELCOME to *Walter Parsons*, who joins our group as a Clerk in the District Three Office.

AUTUMN VACATIONERS WERE: *Z. W. Grant* and family went fishing at Cherry Grove; *Gentry Morgan*, Office Engineer, toured Civil War Battlefields in Virginia and at Gettysburg in Pennsylvania; *Jimmy Lee*, Maintenance Supervisor in Scotland and Richmond Counties, visited Cherry Grove with his family; and *Iva* and Horace *Teague* vacationed in the mountains in western North Carolina. Iva is a secretary in District Engineer *E. P. Swaringen's* office.

ANNOUNCEMENT: Mr. and Mrs. B. C. Webster announce the marriage of their daughter, Patricia Anne, to *William Wayne Walters* of Siler City, on November 3 in the Bonlee Baptist Church. The bride attended Mars Hill Junior College and Woman's College in Greensboro. The bridegroom is a Machine Operator in Chatham County, and has been with the Highway Commission since 1950.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

GOOD LUCK to *J. O. Ervin*, Truck Driver in Rowan County, who was called to active duty October 15. He is a member of the 991st Transportation Reserve Unit.

HAVING her own business appealed to *Charlotte Shuping* so much that she recently resigned as Stenographer in the District Office in Salisbury after 12 years. Everyone joins in wishing her every success on her new venture. At the same time, we've rolled out the welcome mat to *Caroline Honeycutt*, who has replaced Mrs. Shuping.



CONGRATULATIONS to Mr. and Mrs. Robert G. Steelman who were married on September 2. The bride, who is the former Linda Gail Moore is employed by Supervision in Division Nine as a Stenographer.

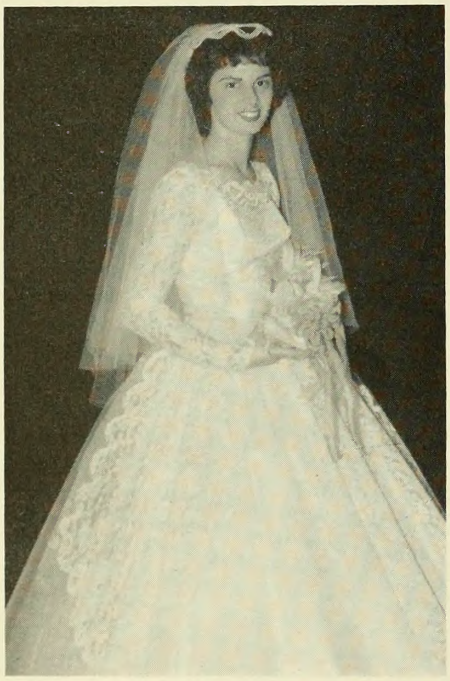
THE ANNUAL family night barbecue supper was a roaring success! State Highway and Prison Employees in Rowan County had loads of fun, and believe it or not, consumed more than 400 pounds of barbecue. Door prizes included an electric razor, toaster, cigars, cigarettes and candy.

SILENT PARTNERS these days are *Buck Patterson* and *Cliff Walters*. Those two went fishing at Carolina Beach and have been strangly quiet about their success. What? No fish?

THREE GUNS, three shots and one deer! This is the story *C. W. "Bill" Graham* is circulating about his new way to hunt deer. Seems three people aimed and fired at the same time, there's a feuding trinagle over "Who shot the deer?" Get the details from Graham before you next go hunting.

GET WELL WISHES go out to *G. W. Shipton*, Truch Driver, Davidson County who recently had a heart attack. Hope to see you at work soon—but take it easy!

DEEPEST SYMPATHY to the family of *J. A. Thompson*, retired Maintenance Foreman of Davidson County who passed away September 20. And it was with deep regret that we learned of the death of Mrs. Mary Elizabeth Ashby, Mother of *Early*, *George* and *Willis Ashby*, all employed by the Maintenance Department.



WEDDING BELLS rang out for Miss Janice Allen and Ardie Lee Perdue on November 5. Mrs. Perdue is the daughter of Dewey Goris Allen, HE II in Davidson County. Our best wishes to the couple.



SANTA CLAUS and James Randall Cottrell had such a good time together last year that Master Cottrell has spent most of his time practicing on his most engaging smile! He is the son of James H. Cottrell of the Road Oil Department.

DIVISION TEN

By CURTIS COLLIER

Division Correspondent

FISHING ENTHUSIASTS abound in these parts. Vacationers from this Division have picked out their favorite coastal spots and spent several days trying their luck. Fishermen this fall have been: *Floyd Penninger* and his wife went on an Annual Fishing Trip to Murrell's Inlet; *Paul Plummer* and his family went to Cape Hatteras; *Fred Payne* dropped his line along the Outer Banks; *James Earnhardt* resorted to Oyster Baskets after no luck fishing; Road Oil Supervisor *W. T. Smith*, Foreman *Claude Ridenhour*, and *Joel Tucker* report a Winston-Salem sneak thief ran off with their catch; *J. F. Turner* and friends brought home several Blues and Spotts.

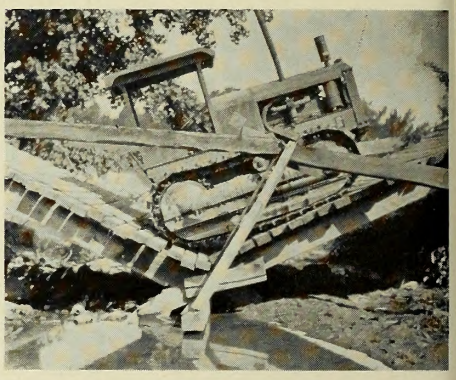
OUTDOORSMEN who have gone out for more "unusual" game are: *Earl Brinkley* and his annual Pheasant Hunting Trip to South Dakota; and *Grier Alexander* who spent his vacation Bear Hunting!

UNCLE SAM dropped *J. W. Jones*, Division 10 Office Manager, a little note recently, and suggested he return for a second visit. Jones has since returned to active service with the 814th Transportation Battalion, Reserve Unit, and is presently in Fort Eustis, Virginia. Temporarily taking over for Jones is *C. E. Collier*, Staff Engineer. *Collier* has been with the Highway Commission for almost 3½ years. We miss Jones, but all join in welcoming Collier to the duties, headaches, hard work and fun of the Division Office.

COASTAL VACATIONERS recently have been: *G. W. Harsell* and family; *L. J. Biggers* and family; the *H. N. McWhirters;* the *E. M. Finisons;* and the *H. R. Sheltons.*

SYMPATHY is extended to Henry S. Campbell upon the death of his Mother.

"MOUNTAINEER" *R. L. Lowery* reports the foliage in western North Carolina and parts of Tennessee was beautiful this fall.



The bridge that fell—1926. (Division 10 photo.)

ON THE SICK LIST RECENTLY; *Lee Williams; J. B. Hatley; Nathan Morgan; Ralph Alderman; P. L. Hough;* and *M. A. Smith.*

WATER SKIING ENTHUSIAST *Roy Edwards* spent a few days at Lake Tillery.

DIVISION TWELVE

By JEAN CLINE

Division Correspondent

THE DIVISION OFFICE welcomed the visit recently of *C. W. Lee*, Chief Engineer, and *W. F. Babcock*, Director of Highways, who came by during a trip to this section of the State. We were also glad to meet *Roger Jackson*, Public Relations Officer, on his first visit to the Twelfth Division.

ENTERTAINING recently at a dinner party was Mrs. *Lois Knox* who was hostess to 40 guests from the Division Twelve offices and Department Heads.

VACATIONING FISHERMEN were: the *S. R. Sutts; Floyd Warren; W. H. Johnson; W. W. Sherrill;* and the *H. K. Eades.*

STORK NEWS: Mr. and Mrs. *C. Guy Tilley* announce the birth of a son, Charles Mark, who weighed in at 9 lbs., 2 ounces. Congratulations to the *Dan Whiteside* who are the proud parents of a son born in September. A daughter, Shelia was born to the *Zeb Spences* of Iredell.

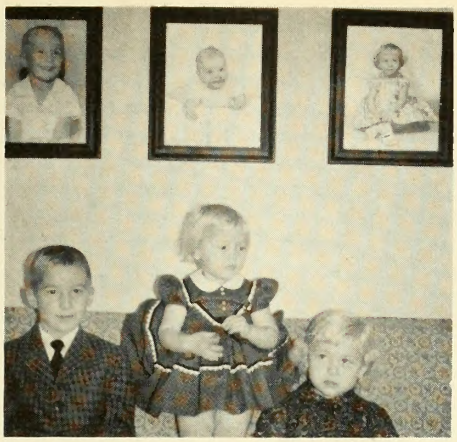
ANNOUNCEMENT IS MADE of the marriage of *Paul Davis Miller* and Mrs. Virgie D. Reeves on October 2. Mrs. Miller is formerly of New London, and Miller is a retired District Engineer. The couple will reside at Statesville.

WELCOME to *Bobby Dean Richardson,* Route 2, Vale, N. C. who has joined the Location Department.



"CHAMPS"! These three members of Iredell County "Little League" helped their team to an 11 to 2 winning season. In the middle is Ronnie McLain, whose fine record as pitcher was indeed responsible for the team's outstanding wins. Ronnie's Dad is Johnny McLain, Eqnipment Department Employee at Statesville and former manager of the team.

SYMPATHY is extended to the family of *J. P. Padgett,* former Maintenance Foreman, who died October 22. Also, deepest sympathy to *C. L. Allen* of Oredell upon the death of his Mother, and to *F. H. Flinchum* in the loss of his wife.



THIS DISTINGUISHED GROUP is posing for two very proud parents. These fine looking children of Mr. and Mrs. T. J. Brooks have recently celebrated the birthday of Miss Norma Brooks in the middle. Left to right: Kenneth, age nine, Norma, just two, and Susan, age five.

NEW ADDRESS: *R. W. Connelly* and his family have moved into their new home off Route 21 near Statesville.

JOINING the Right of Way office is *Mrs. J. B. Morehead,* secretary, who will assist Mrs. Weathers.

OVER 100 members of the Iredell County Maintenance Department held their annual picnic on September 22.

DIVISION THIRTEEN

By DAN TURNER

Division Correspondent

FAMILIES of the State Highway Maintenance Forces and Bridge Maintenance Department drove to the top of Roan Mountain, and settled back to enjoy some old-fashioned talkin' and eatin'. The occasion was on annual picnic, and with roast beef and fried chicken on the menu, it gose without saying that everyone really had a good time!



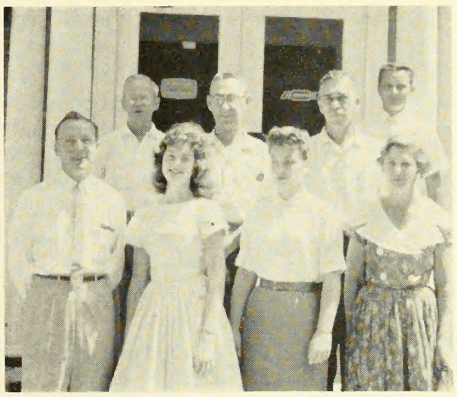
Road Oil Supervisor L. L. Bishop, has completed 35 years of service with the Highway Commission, as of October 24, 1961. Bishop supervised paving of the first road paved by the Commission on Ocracoke.

SYMPATHY is extended to: *Fred Hollifield,* County Foreman, Mitchell County, upon the death of his Mother; *Baxter Bennett,* Bridge Maintenance Department, on the death of his sister; the family of retired Gang Foreman *E. F. Hunter* upon his death.

WEDDING BELLS rang out for Scotties Proffitt, daughter of *Ed. Proffitt* who is Gang Foreman in Mitchell County. Miss Proffitt recently married J. M. Welborn, Jr.

RECENTLY ON THE SICK LIST WERE; *Mack Gouge,* Gang Foreman; *Earl King,* Machine Operator; and *Ed Tipton,* Truck Driver.

RECOVERING after recent illnesses are: Mrs. J. B. Griffith, wife of *J. B. Griffith,* Gang Foreman in Yancey County; and Tom Morrow, father of *John* and *Clay Morrow,* Yancey County Maintenance Department.



REPRESENTING 100% Membership in NCHSPEA are the above personnel of the right-of-way department in Asheville. Front row, left to right: James Moore; Sandra Cole; Ruth Cole; Mrs. Dorothy Clark. Back row, left to right: Walter Thorne, C. Bradley Price; and M. E. White. Division Appraiser, B. T. Bryson, was on vacation.

Division Engineer to worker's son, "When will your dad be able to go back to work?"

Boy: "Can't say for sure, but it will take a long time."

Man: "What makes you say that?"

Boy: "Cause compensations set in."

(Continued from page 3)

projects. In the past the responsibility for keeping up the status of projects has rested within several departments—Secondary Roads Department, Chief Engineer's Office, and the Construction Department. Due to the split responsibility and with respect to the tremendous number of active projects it has not been uncommon to lose track of a project. In some cases this has caused delays resulting in wasted time and effort.

One of the major advantages of having all the project data located in a central location is to keep the Highway Commission and Department Heads informed of the total road improvements program that is under-way throughout the State. In addition to having all the projects located in one place, information is also available as to the type of work envolved as well as the amount of funds for any given project.

Project information is kept up to date by the use of project control boards which outline the information graphically. These boards were designed for the specific purpose of keeping the up-to-date status of projects in the pre-construction phase, projects under contracts, and force account projects. Information is placed on the boards by the use of cards, colored tapes, and with pencils. All information placed on the boards can be easily removed or changed.

One of the more important project control boards is one which deals with all projects approved by the Highway Commission in the pre-construction stage. These projects generally involve the use of Federal Aid Funds-either Interstate, Primary, Secondary, or Urban. Each of these projects involves work that must be accomplished by several Departments from the time the project is approved until such time as the project is awarded to contract by the Commission. Projects initially start off in the Advance Planning Department, proceed from there to the Location Department Photogrammetric Department, Hydrographic Department, and from there to the Roadway, Bridge Design and Right of Way Departments for the preparation of the plans and acquisition of rights of way so that projects can be advertised and bids may be taken. There are other items that must be accomplished prior to the time a project can be advertised and bids taken. These include holding public hearings, securing municipal agreements, and securing various other agreements from utility companies and the like. A record for each project is kept for each of the major items showing the amount of time that is scheduled for each item together with the percentage of completion or progress. This information when arranged for each project formulates the overall schedule and gives a reasonably accurate estimate of the time required to accomplish pre-construction engineering so that a letting date may be estimated.

The information on all the other boards deals primarily with projects under contract construction or force account construction. Schedules are shown in general terms only. Each project is entered with its individual schedule for completion as furnished by the Construction Department and Divisions. Percentages of completion are entered based on monthly project reports. Any other information affecting the project in any manner, such as right of way difficulties, is also noted adjacent to the project. As new projects are approved by the Commission they are added to the boards; and upon completion, they are removed.

An additional activity of the Project Control Department is the maintenance of project files for all major construction projects in both the pre-construction and construction phases. All documents pertaining to a given project are located in the project file. These files are available for review by anyone desiring access to information on any project.

Another responsibility of the Project Control Department is the coordination of all activities relating to Federal Aid requirements for those projects to be financed from Federal Aid funds. Major items in this area include securing of Bureau of Public Roads approved of projects and taking the necessary follow-up action to insure that projects can be closed as soon after they are completed as possible. Other related activities include the review from time to time of Federal Aid Systems within the State and coordinating requests for changes in the system.

The Work Order Section in Project Control has the responsibility for preparing and distributing work orders for all projects approved by the Commission. Work order requests that are received from the Departments and Divisions are checked so that information is compiled as accurately as possible. The Work Order Section processes from 200 to 300 work orders, changes, and notice of closing each month. During periods when new funds are allocated for construction work, this Section may normally expect to prepare as many as 500 new work orders in a month's time. These work orders will involve all of the Divisions and all of the Engineering Departments.

Basically the Project Control Department is a coordinating agency within the Highway Commission organizational framework. It is on the Director's staff although much of its work deals with various engineering departments. The information that is kept by Project Control is disseminated to any Department in determining personnel requirements requiring its use. Information may help based on present personnel status and the volume of work yet to be completed. This applies both to force account construction personnel as well as construction engineering personnel. The Department also supplies pre-construction project information in order that scheduling information can be supplied to anyone interested in a particular project.

N. C. FUEL AVERAGE

Motor-fuel consumption is expected to total 64.9 billion gallons for the United States in 1961, a gain of 2.6 percent over 1960, Federal Highway Administrator Rex M. Whitton announced. The 1961 estimate, prepared by the Bureau of Public Roads, U. S. Department of Commerce, is based on information received from State agencies and other sources.

Motor fuel consumed in highway use is expected to total 59.4 billion gallons, including 56.7 billion gallons of gasoline and 2.7 billion gallons of special fuels such as diesel and butane. Nonhighway use of motor fuel is expected to be 5.5 billion gallons.

Based on this estimate of highway use of motor fuel and the estimate of 1961 motor-vehicle registrations, the annual rate of fuel consumption for 1961 is expected to be 781 gallons per vehicle.

California leads the States in expected consumption of motor fuel for highway use, with 5.9 billion gallons. California plus seven other States—Texas, New York, Pennsylvania, Ohio, Illinois, Michigan and New Jersey—will account for 47 percent of the total highway-use fuel consumption.

North Carolina is estimated to use a total of 1,508,327 gallons (in thousands of gallons) of gasoline and special fuels, and it is also estimated that each vehicle will average 845 gallons.

Back In 1924—

(The following article appeared in the July-August, 1924, issue of the North Carolina Highway Bulletin.)

By H. K. Witherspoon, Editor

"North Carolina's State Highway System has for some time past attracted the attention of engineers and others interstate in this line of endeavor and has at various times been the occasion for a visit to the State by individual engineers from foreign countries but not until the recent visit of the Pan-American Highway Commission did the highway work of North Carolina assume an International aspect. In this delegation there were thirty-six delegates from the following Latin American Countries: Argentina, Bolivia, Brazil, Chile, Columbia, Costa Rica, Cuba, Dominican Republic, Equador, El Salvador, Guatemala, Honduras, Mexico, Nicarauga, Panama, Paraguay, Peru, Uruguay, Venezuela and eighteen representatives from the Department of Agriculture, Department of Commerce, Highway Education Board, and the National Automobile Chamber of Commerce.

Arriving in Raleigh from Washington on the morning of June 4th in special pullmans, the delegates were met at the depot by representatives of the State Highway Commission and of the civic organizations of the city and were carried to the Sir Walter Hotel where they were entertained at breakfast . . . . at the conclusion of the breakfast the group was carried to the Governor's mansion where an informal reception was held.

(After several appearances around the Triangle area, the Latin American delegates began a State tour which ended in Asheville. In each case where they viewed roads under construction, an interpreter would translate in Spanish every detail of the project. In every town, the hospitality makes even present day hosts gasp a little. In Yanceyville a contractor gave a barbecue for 10,000 people. The Pan-American visitors were honored in Sylva by a baseball game staged by the Cherokee Indians. In Witherspoons' article, he comments . . . " No attempt will be made to describe the game here except to say that it was a combination of baseball, football and wrestling.")

The benefits derived from the visit of the Pan-Americans to North Carolina can be measured in a number of ways. The advertising gained by the State, and the cementing friendship between the United States and South American countries represented are two of the direct results of the affair. At every point along the route where the caravan stopped the proverbial North Carolina hospitality was in evidence, particularly was this true in hotels.

The trip was photographed . . . and moving pictures are being made by the Bureau of Public Roads and by the State Highway Commission. The latter picture, entitled "North Carolina Schools Pan-Americans in Road Building" will be shown at various theatres throughout the State."

Editorial On Highways

— 1924 —

THIS EDITORIAL APPEARED IN A TENNESSEE NEWSPAPER IN 1924.

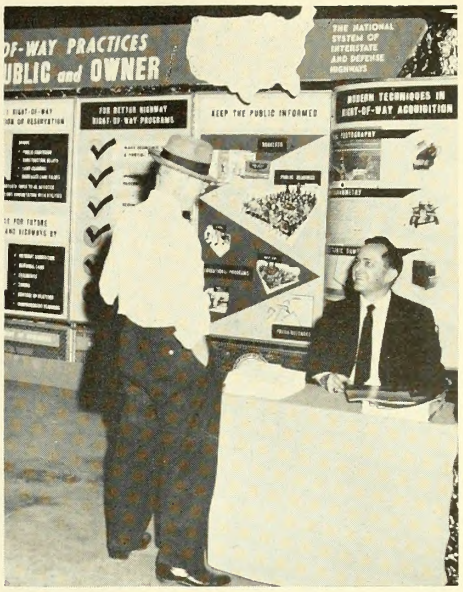
"It is positively sickening the way the state of North Carolina brags about the roads they have over there. The selfish creatures have published an illustrated booklet giving views of the roads with descriptions of scenery telling of how the $75,000,000 spent on them is being taken care of.

"In view of the sorrows of Tennessee on the road question, it is regarded as very inconsiderate of the neighbor state across the mountains to rub it in so rough.

"Tennesseeans have just about decided to forget about North Carolina and never go there. Traveling on those smooth and silken thoroughfares tends to unhappiness for Tennessians. Why look at so unobtainable a bliss?" — Greenville Democrat-Sun.



Merry Christmas



The Right-Of-Way Department was this year's sponsor of a highway booth at the North Carolina State Fair held in Raleigh. Shown distributing highway material is Collis Lewis, Right-of-Way Aide.

BANKS

(Continued from page 1)

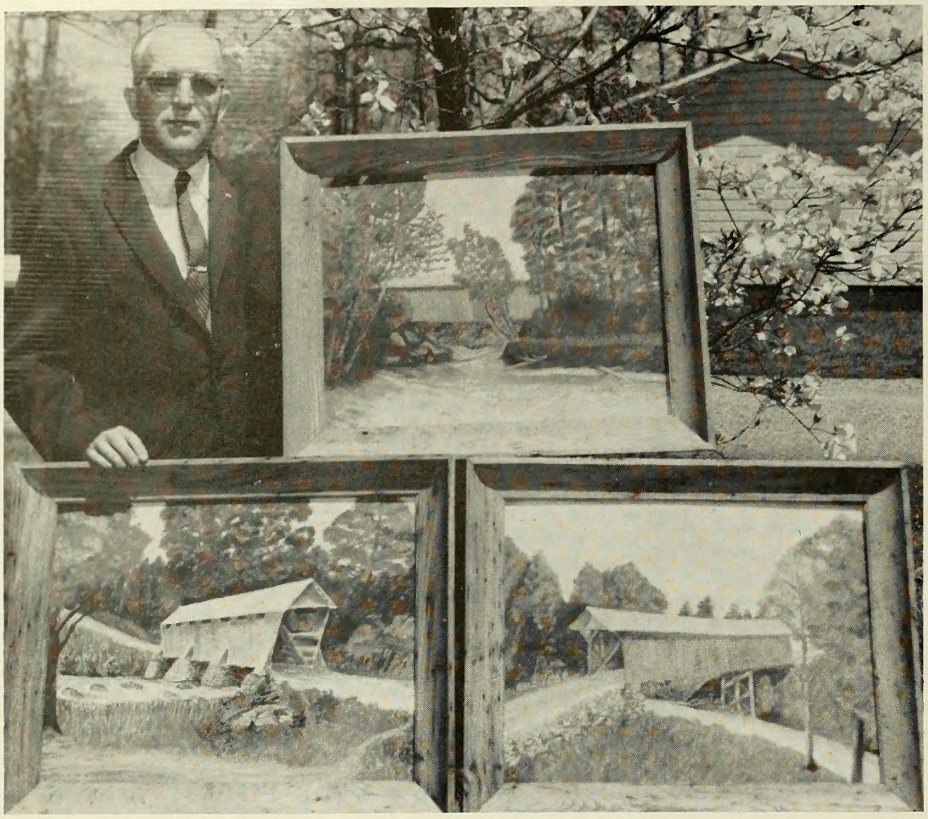
near future with an assistant, and adequate secretarial help would be provided.

Known well to employees throughout the 14 Divisions and around Capitol Square, Banks began his highway career thirty years ago in New Bern when a district office was established by the State. In 1938 Banks came to Raleigh with the Bridge Department and Bridge Maintenance until 1945. During the six year period he held various positions from office to field construction.

From 1945 to 1951 Banks acted as Business Manager of the Prison Department, and for the past 14 years has been executive Secretary of the Highway-Prison Employees Association. ROADWAYS readers are familiar with his reports on Association activities.

In 1958 Banks was named "Tar Heel of the Week" by the News and Observer. He is a 32nd degree Mason, Scottish Rite, Past Potentate of Sudan Shrine Temple; and affiliate member of North Carolina Society of Engineers.

Banks is married to the former Mildred Tyson of New Bern and they have two sons, Otis Gordon, 25, a Lieutenant in the U. S. Navy; and William Ronel, 23, Institutional Salesman for Honeycutt Fruit Co. of Raleigh.



The last three covered bridges remaining in North Carolina have been painted by J. W. Puckett, Principal of Rockwell School, Rockwell, N. C. The top painting is Bunker Hill Bridge in Catawba County on Lyles Creek near Clairmont. On the left is a bridge near Pisgah in Randolph County (may be called Richland Creek Bridge). The Uhwarrie Bridge, right, is in Randolph County west of Asheboro and just north of Highway 64.

PROJECT H

(Continued from page 2)

the two year period evaluations were made on the different herbicide uses, and the most effective results were the bases for starting a program of using herbicides as a maintenance operation.

Due to some failures or inconclusive results in the herbicides or application techniques, the contract for Project "H" was renewed in July 1961 for two additional years to further evaluate existing experimental plots, modify existing maintenance applications where needed, experiment with new chemicals being introduced, and to continue research on retreatments.

For the initial season of application in 1959, one sprayer was used to install the experiments. Following the first season five additional sprayers were purchased to begin the herbicide maintenance program in all Divisions. Areas presenting the greatest hazard to the motoring public and the greatest maintenance problems in the particular Division were treated first with a planned program for expansion of treatment and a follow-up program of retreatment.

W N C

(Continued from page 9)

to help. . . develop resources that a kind and generous Creator has placed in our hands."

Evans, who was seconded by Highway Commissioner James MacLamroc, of Greensboro, equally cited the difficulty in obtaining right-of-way in for secondary roads. "You cannot build a place to put it. . .we need the support of every citizen in western North Carolina in our efforts to acquire right of way.

Two road tours were arranged for members of the Commission. On Friday, October 27 the Commission toured sections of US 70, NC 209 and NC 63. The following day a tour included sections of US 70, I-40, NC 80, US 19 E and US 19. A total of 193 miles was covered by Commission members in the two day tour.

California traffic offenders are assessed $1 extra for every $20 fine or fraction thereof to finance high school driver education.

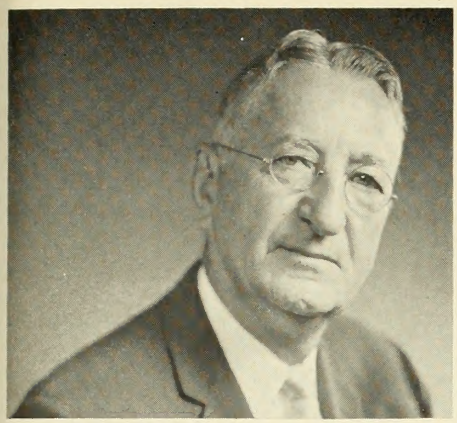
RIGHT OF WAY

(Continued from page 2)

Right of Way Agent will call upon affected property owners and offer the amount of the approved appraisal in payment for damages. If an agreement is not reached on this initial visit, a second call will be made after giving the property owner a reasonable time to consider the offer. If the offer is accepted, the Right of Way Agent may secure a written agreement at that time to expedite the closing of the claim. Even so, a period of several weeks may be required before necessary legal work of checking titles and preparing for payment can be completed. In the event that a property owner cannot reach an agreement with the representative of the Commission prior to the time it is necessary to construct the project, the Commission must file an action and deposit the amount of the approved appraisal in court before going ahead with construction. The owner may immediately withdraw the amount deposited without prejudice to further negotiation. If at any time he decided to accept the amount deposited as full compensation, he need only notify the Commission Right of Way Agent. If he desires to contest the amount offered, he must file an answer in the action within a year from the time he was served with summons.

After a major change is proposed for a road or highway, engineers of the Highway Commission prepare and post a map of projects in the courthouse of each county where changes have been suggested. These maps show the line of old highways together with the newly-proposed facility. All property lines which the road will cross are shown. In addition notices are printed in county newspapers or in prominent places where no locally published paper exists.

In all cases, the North Carolina Highway Commission feels the most important ways of determining highway needs in any area is to take the issue to the people of the area. This is done by holding public hearings outside the City of Raleigh. Any person or group of persons is given ample opportunity to express his views on highway and road needs before the Commission. Recordings are made of all presentations and made a permanent record for the Highway Commission's consideration. As a property owner, each person should understand Right of Way procedures so that he will be completely informed on the preliminary plans of the Highway Commission.



George McKinley

McCrary Award Winner

Former McCrary Award winner George A. McKinley completed 35 years with the Highway Commission in 1961, and has retired ater a long and devoted career.

A Civil Engineering graduate of Alleghany College, McKinley joined the Highway in 1926 with the Location Department, and three years later was promoted to Party Chief. He completed locations across the Blue Ridge Mountains with the location of US 70 from Old Fort to Ridgecrest, and for this achievement was named winner of the McCrary Award in 1951. During the survey work, he developed a new technique for locating curves, both simple and spiral where PI is inaccessable.

McKinley is married to the former Margaret Cheek of Sparta, N. C.

Secondary Roads

(Continued from page 1)

Roads constructed to a higher degree than in the past in order to meet the ever increasing traffic volumes which they are carrying and to provide the traveling public with the safest possible route. The Commission is also faced with increasing costs in the construction of the roads.

To meet these problems the Highway Commission has adopted a policy which will give top priority to those roads that serve as a principal through route or connecting link and has potential as a future principal county route that will aid in developing a coordinated county transportation system and in developing the economic potential of the area.

Commission Chairman Merrill Evans and Director of Secondary Roads Roney have voiced their approval at the progress being shown by the Commissioners in programming the funds and are enthusiastic over the potentialities for the expanded program which is being made available through the Governors additional allocation.

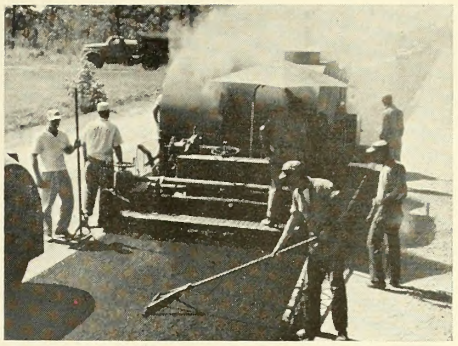
The State of North Carolina has a Secondary Roads System of which it can be justly proud and the Highway Commission is making every effort to provide her citizens with the best possible service with the funds which are made available.

The budget, I'm told, is a pay-as-you-go financial plan that doesn't let you go anywhere. (A. C. Snow)

"Look what I got for my wife," exclaimed the fellow in the Tenth Division, pointing to a new convertible.

"Lucky dog," his friend responded, "where did you make a trade like that?"

One thing about being bald—at least it's neat.



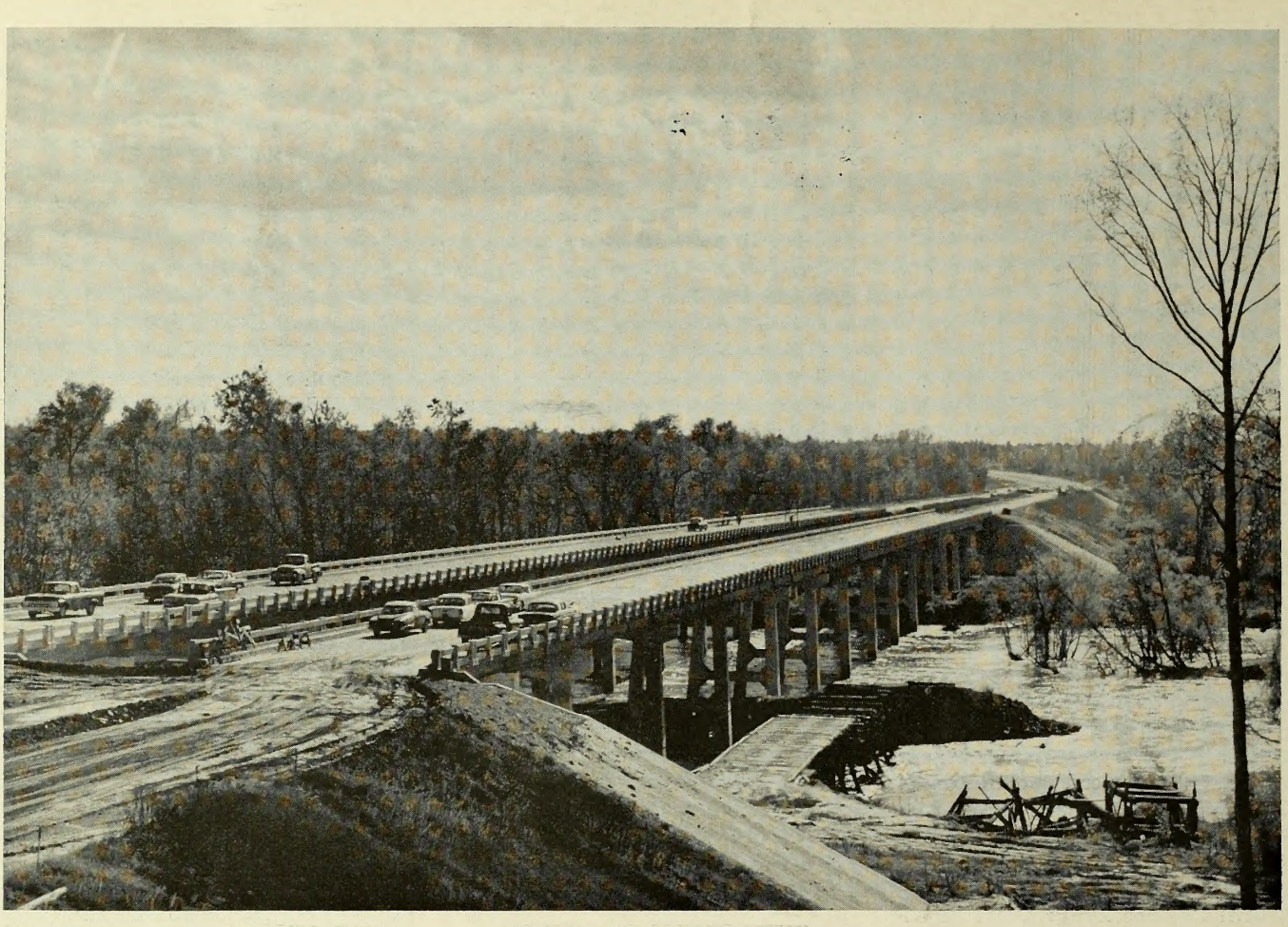
A double duty machine used in the Sixth Division is a hot-mix and cold-mix paver. As a cold-mix paver, above, the machine uses RC-2 and cold aggregate. Rapid curing asphalt can be heated to only 150 degrees Fahrenheit, because of the naptha used as cut-back. As a hot-mix paver, the machine uses AP-3 asphalt (85-100) penetration and hot aggregate. A dryer is then required (see below). A visual aids motion picture has been made illustrating this conversion process, and a showing may be made by contacting the State Highway Commission in Raleigh.



"CONNIE" Mac Adam



— % Ohio Citizens Highway Committee



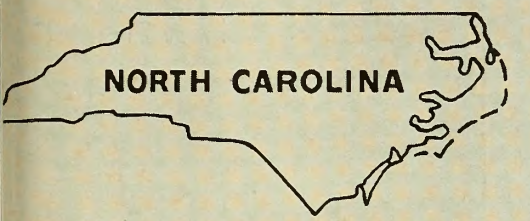
This bridge, a section of I-95, is presently under construction over the Roanoke River, on the Halifax and Northampton County Lines. (Photo courtesy Harold Powell.)

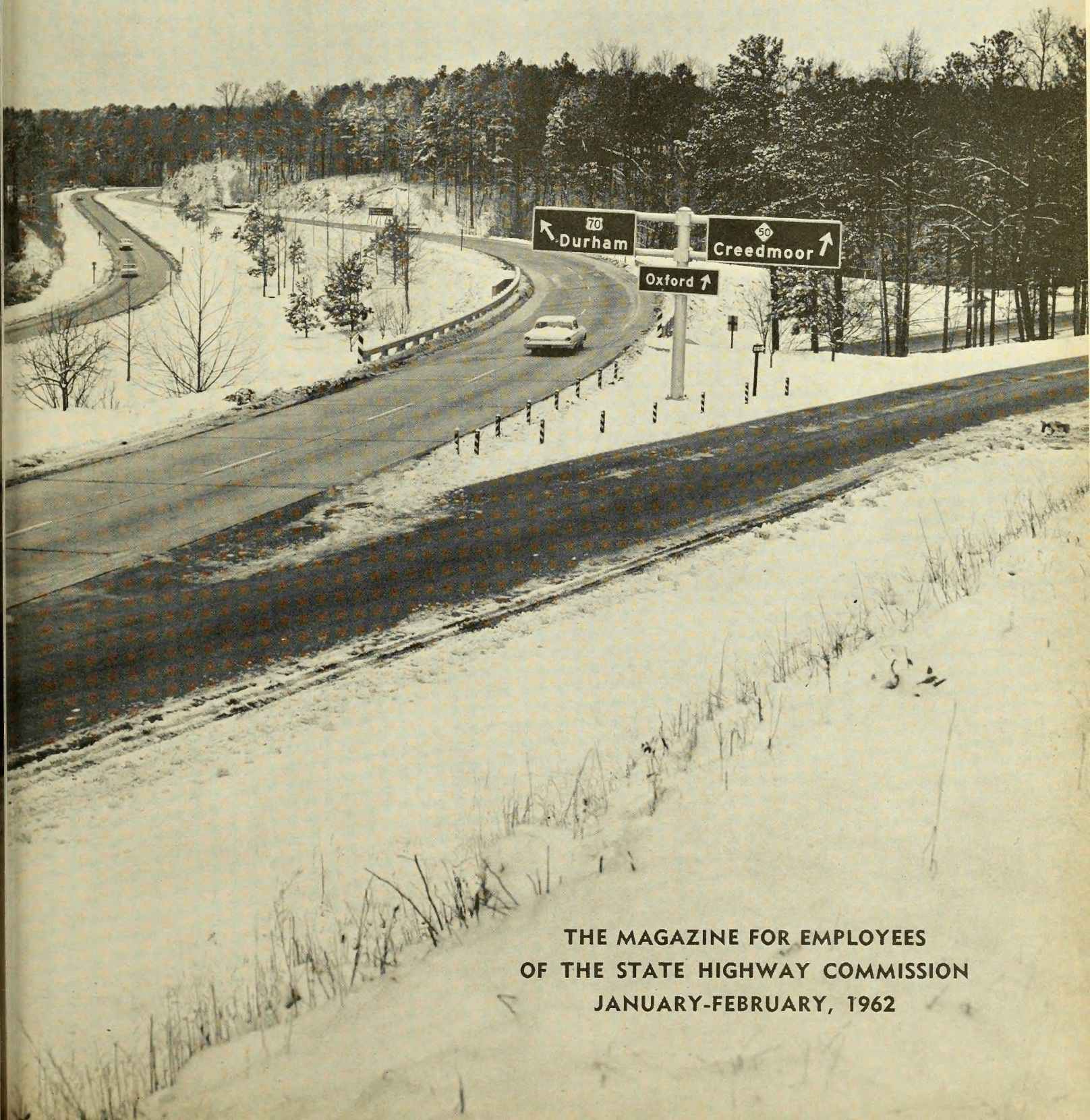
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ROADWAYS





THE MAGAZINE FOR EMPLOYEES
OF THE STATE HIGHWAY COMMISSION
JANUARY-FEBRUARY, 1962



Among the dignitaries present for the Ribbon Cutting Ceremonies were left to right: Raymond Bryan, President T. A. Loving Co. of Goldsboro, contractors for the Warren Bridge; Lindsay C. Warren; Governor Sanford; Congressman Herbert Bonner; and Highway Commission Chairman Merrill Evans.

LINDSAY C. WARREN BRIDGE OPEN TO TRAFFIC

Governor Terry Sanford, Highway Commission Chairman Merrill Evans, Highway Commissioners Graham Elliott and Gilliam Wood together with Congressman Herbert Bonner headed a delegation of dignitaries attending the formal opening of the Lindsay C. Warren Bridge across the Alligator River.

At noon, Congressman Bonner of the First Congressional District welcomed the official party and members of the general public present for the ceremony.

Following Congressman Bonner's remarks, an official party boarded the Alligator River Ferry for its final run from Sandy Point to East Lake. Upon the arrival at East Lake, Chairman Merrill Evans addressed the group and recognized the ferry personnel.

After leaving the ferry docks, Governor Sanford and party walked to the eastern terminus of the bridge where the Governor addressed the group gathered for the ribbon cutting ceremonies. The Governor then rode in the first car to be driven across the bridge. The party then proceeded to Columbia for a luncheon given by the citizens of Columbia.

The Alligator River bridge was named for State Senator Lindsay C. Warren of Washington, a former Congressman and Comptroller General of the United States.

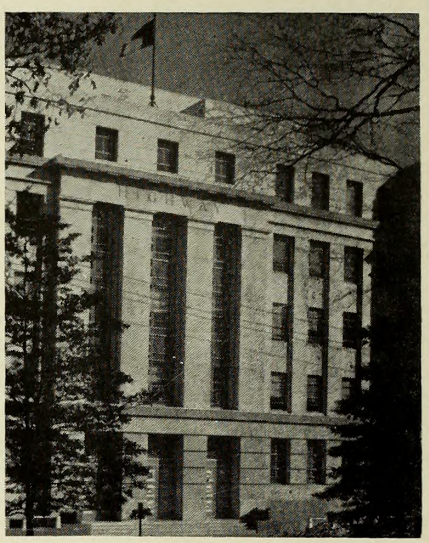
The formal opening of the bridge is a preliminary event to the elaborate dedication program scheduled for May 10, 1962, at which time several hundred people are expected to be in attendence for a day-long ceremony sponsored by the Southern Albemarle Association and officials of Dare and Tyrrell Counties.

THE COVER

Snow covered most of North Carolina soon after 1962 arrived in the Tar Heel State. Highway Division offices were on the alert to meet winter weather, and main highways were efficiently and rapidly cleared of snow and ice.

The cover picture was taken by Highway Photographer Harold Powell on a section of the Raleigh-Durham Highway just outside Raleigh. For related stories, see pages 8-9.

ROADWAYS MAGAZINE



A Publication For
N. C. Highway Employees

JANUARY-FEBRUARY

VOLUME XII

NUMBER I

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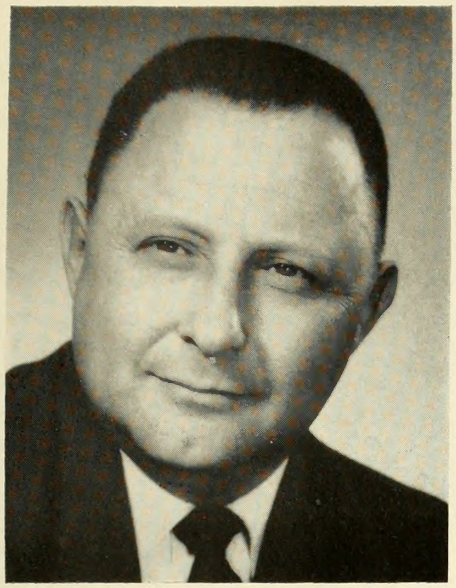
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From The Director's Office

Dear Fellow Employees:

Now that the old year has gone and 1962 is upon us, I wanted to take this opportunity of extending a New Year's Greeting to you. I hope that these twelve months will bring both good health and happiness to you and yours.

In many ways 1961 was a good year. At the Federal level the Congress provided additional funds in order that the Interstate Highway Program would continue on its original schedule with a completion date of 1972. This action will permit the Highway Commission and our design and right-of-way people to make logical schedules for the completion of this great system of highways.

At the State level in North Carolina through the efforts of Governor Sanford, Chairman Evans, and many members of the General Assembly, additional funds were provided for Highway Commission operations for the 1961-1963 biennium. This took place by the transfer of the administrative costs of the Prison Department, Paroles and Probation Departments from the Highway Fund to the General Fund. All of these additional funds were earmarked for secondary road construction. The year 1962 will be the greatest single construction year for improving secondary roads since the Secondary Road Bond Issue.

In order to complete this enlarged program on schedule, all of us in the design, construction, maintenance, right of way and equipment activities must continue to accomplish our job with increasing effort and efficiency. All of us here in Raleigh are certain that we can count upon the cooperation of all of our employees throughout the State as we work together towards the goal of providing an improved secondary road system for the public.

In 1961 the Highway Commission was enlarged from a seven-member Commission to eighteen members and a full-time Chairman. The eighteen Commissioners all have an area for dealing with the public and developing secondary road programs. They have been working most diligently in these areas. I hope that each of you in the near future can get to know your Commissioner well. He can be a great help to you with your day-to-day problems in working with the public, and I am certain that all of you will cooperate to the fullest with the Commissioner in your area and your supervisory personnel to make 1962 a great construction year for the State Highway Commission.

Sincerely yours,

W. F. Babcock

W. F. BABCOCK

DIVISION ELEVEN REDISTRICTING IS APPROVED

The State Highway Commission, meeting in Raleigh on February 1, 1962, granted approval to the proposed redistricting of counties located in the Eleventh Highway Division.

W. J. Brookshire, office manager in the Division Headquarters in North Wilkesboro, will be District Engineer for the newly-formed third district.

Division Eleven previously had two districts with over 5,600 miles of roads under its jurisdiction. Because of mountainous country, difficulty of maintenance, and circuitous travel, the Commission felt it desirable, from the standpoint of efficiency, to create a third district.

The three reapportioned districts are as follows:

District One: Yadkin, Surry, Alleghany Counties (District Office: Elkin) —District Engineer R. M. Bradshaw.

District Two: Wilkes and Ashe Counties (District Office: North Wilkesboro) —District Engineer W. J. Brookshire.

District Three: Caldwell, Avery, Watauga Counties (District Office: Boone) —District Engineer J. T. Winkler.

There will be no new District office construction necessary inasmuch as there are now District offices at Elkin and Boone and a District office can be housed for the new district within the Division offices at North Wilkesboro.

RUMBLE STRIP

The Connecticut Turnpike is testing a "rumble" strip in an effort to reduce accidents at toll barriers. Strips were placed several hundred feet east of the toll gates, thus giving a driver sufficient time to bring his vehicle under control before reaching the barrier. The rumble area was created by placing a series of 8-inch wide and ¼-inch thick strips across both lanes at 6-inch intervals. Three of these areas were laid down with 40 feet of untreated areas between them.

Be careful when you give out advice—some people might be foolish enough to follow it.

No woman has ever suffered in silence unless her phone was out of order.

HIGHWAY RESEARCH BOARD

The Fourty-first annual meeting of the Highway Research Board was held in Washington, D. C., January 8-12. Highway Commission employees attendwere: W. F. Babcock, Director; Ervin Dixon, Controller; A. C. Dodson, Geologist; T. V. Fahnstock, Bituminous Engineer; L. D. Hicks, Chief Soils Engineer; R. J. Kimley, Advance Planning Engineer; Billy Rose; W. A. Wilson, Jr., Design Engineer; and J. S. Burch, State Planning Engineer.

The Highway Research Board, a collective brain department for highway departments across the United States is composed of 48 member organizations and 1700 individual associates. The Research Board itself was founded in 1920, and its purposes are set up as follows: encouragement of research and to provide a national clearing house and correlation service for research activities and information on highway administration, transport and technology.

Valuable aspects of the Research Board stem from actual information shared as well as contact with other State officials throughout the Country.

Ervin Dixon, Controller for the North Carolina State Highway Commission was one of the speakers during the Conference, and an excerpt of his speech follows:

If the total highway transportation problem is to be solved, a similar approach is needed within the State Highway Departments for the primary highways and of equal importance the Secondary roads and the urban system.

What steps then should be taken in order that the State Highway Departments may achieve this overall long-range objective? As an illustration, some of the actions taken by the North Carolina State Highway Commission may be of interest. It is important, however, to understand that in North Carolina the Highway Commission has responsibility for over 70,000 miles of roads, including all of the primary roads, all of the secondary roads, and all of the major thoroughfares in urban areas. Hhus, in this State it may be easier to work towards a long-range goal for all highways systems than in the mapority of the States weher highways activities are under many separate governmental units.

(1) As a first step in North Carolina the most detailed studies were made to determine what might be considered the appropriate levels of service to be provided on all highway systems for the future. And, it is of greatest significance to reiterate that this first assumption of future levels of service to be provided sets the long-range objective or goal.

(2) With this goal established, the regular population and traffic projections were made for all primary, secondary, and urban thoroughfares.

(3) Cooperative thoroughfares were developed in all major urban areas.

(4) Relating future traffic projections to the primary, secondary and urban system as it related to the capacity of the existing systems as defined by the level of service, it was then possible to determine the future needs. As a result of this study, it was possible to estimate the cost of thousands of improvements and to reasonably establish a period when such improvements might be needed.

(5) These needs when related to probable future revenue indicated that a minimum of approximately 500 million dollars in additional funds would be needed over the next 15 years to provide a reasonable level of service.

(6) This report, given rather wide publicity, made available to the Governor and the Legislature, indicated that North Carolina was indeed falling behind in coping with its highway transportation problem. Taking cognizance of this fact, the Governor and the members of the last Legislature took positive steps to provide more funds for highway operations which is closing the gap between highway needs and highway revenues.

(7) Admittedly this long-range plan is not unique and many Highway Departments have been developing such plans. In summary, it is considered fundamental that any logical fiscal management depends on such a plan in considerable detail as an overall objective. Without it, legislative bodies have no bases for evaluating highway needs as they relate to overall governmental needs. Without it there is no equitable basis for determining the appropriate distribution of the total tax dollar.

Without such an objective, highway management tends to be lackadaisical at all levels of state government.

As an aside, such a plan bring home forcefully to the people of the State that the Highway Department is not necessarily "the rich uncle" that many believe it to be.

BECK IS NEW RESIDENT ENGINEER

Fred Henderson Beck, Resident Engineer in Asheboro, has been named to succeed the late Sam P. Swaringen as District Highway Engineer in the Eighth Division. Beck is in charge of maintenance for Moore, Lee and Hoke Counties.

After joining the Highway Commission in 1945 as a rodman, Beck held various positions and prior to his promotion as District Engineer, was Resident Engineer in Aberdeen. He is registered with the North Carolina State Biard of Professional Engineers and Land Surveyors, and is a member of the North Carolina Society of Engineers.

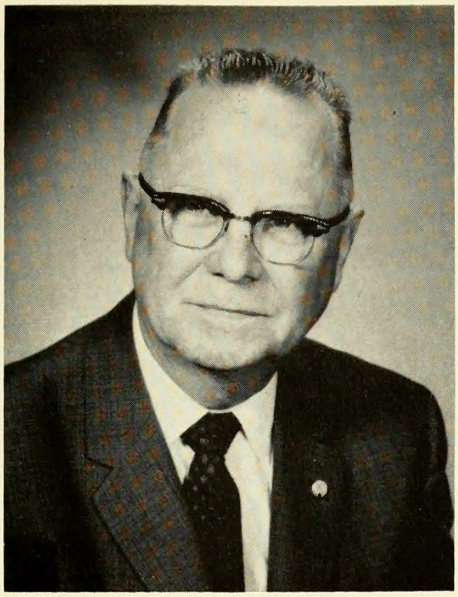
Beck, the son of Mr. and Mrs. T. L. Beck, of Linwood, is a graduate of Germantown High School, and attended the University of Wisconsin. He entered the Army in 1941, and graduated from the Flash and Sound Survey School at Fort Still, Oklahoma. While serving in the European Theatre he received the Purple Heart, and was discharged in 1945 as a Master Sergeant.

He is married to the former Bessie E. McDonald and they have two children, Fred Jr., and Lauree Beth. They presently reside in Carthage, and are members of the First Presbyterian Church.

National Geographic Calls North Carolina "Dixie Dynamo"

Tar Heels throughout the State will be interested in a fourty-two page feature story appearing in the February issue of National Geographic Magazine.

Entitled "Dixie Dynamo", the article includes several photographs on North Carolina tourists attractions. Two sections of State highways are shown: a view from Pinnacle Gap overlook pictures travelers on the Blue Ridge Parkway; and a portion of US Highway 421, called "Boone Trail", in the western part of the State.



PERSONNEL OFFICER ASSUMES DUTIES

Withers Davis, new Personnel Officer for the State Highway Commission, has long been associated with North Carolina as a highway career man.

As early as 1921, he served as instrumentman in the Charlotte area. In 1925 he was promoted to the position of Resident Engineer with headquarters in Clinton, and after three years, accepted a position as Resident Engineer with the Alabama State Highway Department. In 1933, he returned to his home State and became Resident Engineer with headquarters in Reidsville. He joined the Right of Way Department in 1939 in Fayetteville and later became Assistant Right of Way Engineer with the State Highway Commission.

Davis was born in Charlotte, July 4, 1902, the son of B. S. Davis and Florence Withers Davis. As Area Right of Way Agent for Eastern North Carolina, his residence has been 3102 Baker Street, Fayetteville, N. C.

His wife is the former Annie Black and they have one daughter, Mrs. Florence D. Stepp and two grandchildren. He is a member and former vestryman of St. Johns Episcopal Church in Fayetteville and is a member of the Cape Fear Engineers Club and the North Carolina Society of Engineers. He is a graduate of Charlotte High School and earned a graduate certificate in Civil Engineering by means of an International Correspondence Course.

The appointment represents the promotion of a career employee to an important administrative position. Davis is a professional engineer and has a splendid working knowledge of the requirements for qualified personnel in all Departments of the Commission. He has been active in the North Carolina State Highway and Prison Employees Association and has served as its president. He is presently a member of the Board of Trustees of the State Teachers and Employees Retirement System.

Sam Swaringen

Sam Swaringen, District Highway Engineer, died Wednesday, January 17, in Moore County Hospital.

At the time of his death, Swaringen was in charge of maintenance in Moore, Lee and Hoke Counties.

Swaringen has been connected with the Highway Commission for the past fourty years, having started back in 1921, soon after its organization under Frank Page as first State Chairman.

He is survived by his wife, Mrs. Sne Pleasants Swaringen; a twin son and danghter, Sam Swaringen of San Diego, California, and Mrs. N. McK. Caldwell of Aberdeen; four grandchildren and one half-brother.

The following tribute was paid to Swaringen in the Sandhill Citizen Newspaper in Aberdeen:

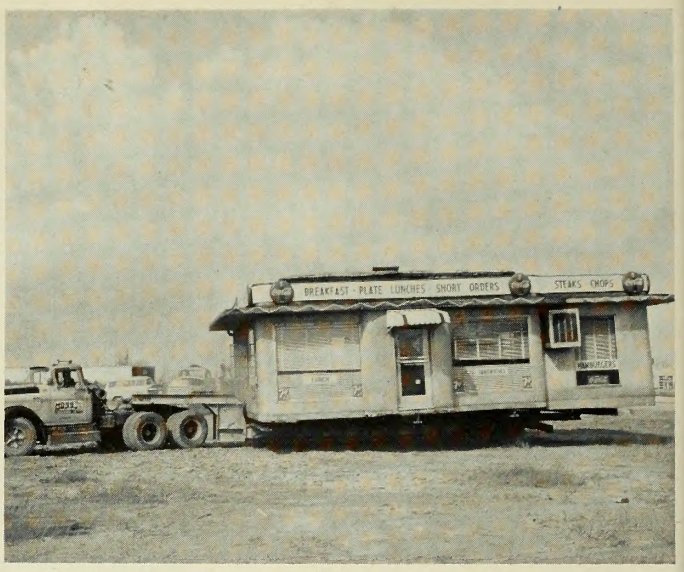
> "Sam Swaringen was a quiet and unassuming man. But he was a good man, a fine citizen and a good road engineer and builder. He would have been eligible for retirement had he lived until next spring. Yes, a retirement well earned. Solid, dependable citizens like Swaringen made a community a better place in which to live."

TO HAVE AND TO OLD

The bride white of hair stoops over her cane
Her footsteps uncertain needs guiding—
While down the aisle with a wan smile,
The groom in his wheelchair comes riding.
Now who is this elderly couple thus wed?
You'll find when you closely explore it,
That here is the rare conservative pair,
Who waited 'til they could afford it!

(Home Economics Joural)





"DER SIR: I Calld You for a Permit"

Without a good sense of humor and plain, old—fashioned patience, employees of the Highway Permit Section might claim they had the strangest "translating problem" in the State.

Often, the Permit Section will receive telephone calls, letters and even telegrams asking for immediate assistance in securing the type permit necessary for a particular load. The entanglements and unusual requests are often as confusing as they are humerous.

The following letter remains a classic:

Der Sir.

On the 23. of Oktober. ICalled you for a Permit to move a 51. foot, long and 10 foot wide Hause trailer, to be moved to Grenville.

It woars putt in the Name of ———— ———— Had a Wreck.

De damage woars 327.50. wich he will not pai. We ar going to Court, and He told my lawyer That he had not been given a Permit from N. C. I Paid 6.95 for that Telegram that you sendet me. Please could I have a Coppy of that telegram.

SO I ceen give it to mey Lawyer.

Thank you.

Even if the man may not have been a spelling scholar, he ironically supplied sufficient information to aid the Permit Section in obtaining all the necessary data.

And there are also those telephone calls. D. B. Sutton recalls a long distance phone call from a man in the western part of the State. During the conversation, the gentleman was trying to describe the route he wished to use in moving his house trailer.

"Well, you know where Judge Thomas lives, down at the corner of the road."

Sutton replied that he hadn't had the opportunity to meet the good judge—nor did he know just where he lived!

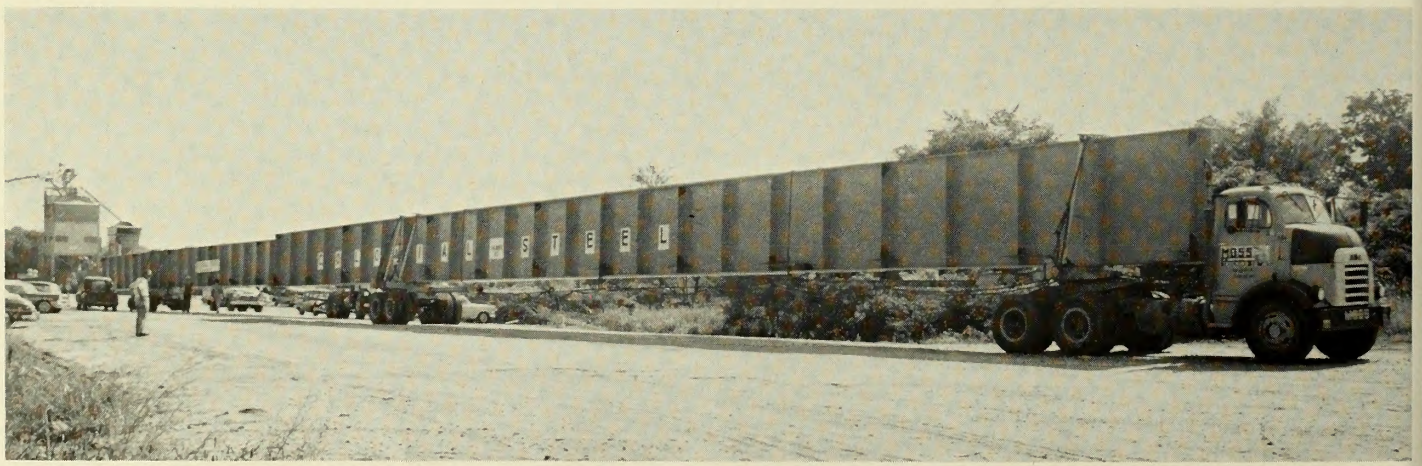
Despite the confusion and inability people have to locate themselves geographically, the Permit Section still maintains prompt and efficient service to requests reaching their office.

At the rate of 25 to 30 permit requests a month, North Carolina motorists are becoming familiar with the sight of a church or house moving down the highway.

Highway Assistant Chief Engineer Ivan Hardesty recently stated, ". . . We have had few complaints from the public over being inconvenienced, and I can't recall any accidents." However, the Highway Commission has developed a set of limiting rules in an attempt to control the movement of traffic-blocking loads.

1. The haul may not be more than 20 miles in any one direction:
2. No hauls may be made on weekends or holidays;
3. Haulers are required to stay close to the shoulders, on them, if possible.
4. A load that can be broken down must be;
5. A Highway Patrol escort is required;
6. And no hauls may be made through long tunnels or over bridges.

All routes must be cleared with the Permit Section, and in many cases, the route will be set up by the Highway Commission, in the cases of detours and exceptional loads. (Photos courtesy Moss Trucking Co., Charlotte, N. C.)



N. C. S. H. P. E. A. Association News

VOLUME 11-NUMBER 1 JANUARY, 1962

FEDERAL INCOME TAX RETURNS —don't forget that sick pay under certain conditions is excludable from your Federal Tax Returns, which can mean a considerable savings to you in taxes paid. A memorandum went out from the Association Office on January 5 to all local officers, prison camps, etc., for posting on local bulletin boards. I suggest you refer to this for additional information before filing your return. **ALSO,** a new schedule of allowable deductions from Federal Returns for North Carolina Tax has been released by the Internal Revenue Service, this new schedule being due to the revisions in the Sales Tax as of July 1, 1961. The new schedule of allowances was also sent to local officers for bulletin board posting on January 5, to which you might refer prior to filing since the figures quoted therein will be allowed by IRS without question, whereas any higher amounts claimed would be subject to verification.

INSURANCE EXPERIENCE—for the policy year ending September 30, 1961, was a total return in claims of 92.41% of premiums paid; added to this is 2.5% premium tax paid by the Company to the State of North Carolina for a total paid out of 94.91% of premium paid as against a guaranteed return to us of 92.5% total.

Statistics for the first two months of the new policy year beginning October 1, 1961, through November are as follows: Employee Medical, 87.72%; Employee Accident and Sickness, 71.32%; Dependent Medical, 66.46%; Employee Death and Dismemberment, 139.27%; Employee Life, 91.57%; Retired Life, 220.43%; Total Life, 98.21%; or a total return of all coverages of 83.36% of premiums paid. This indicates a gradual improvement in our insurance program, and if the trend continues, we should be in a position to improve the financial stability of the program and rebuild the depleted reserves. The figures quoted reassure that the recent revisions in the policy benefits was proper.

The Insurance Committee met in Raleigh on January 17 for regular quarterly review of experience and to discuss certain changes in benefits that will be of material benefit to the employees. The results of that meeting will be published for your information at a later date.

HOLIDAY SCHEDULES FOR 1962— April 23, Easter Monday; May 10, Memorial Day; July 4, Independence Day; September 3, Labor Day; November 12, Veterans Day; November 22, Thanksgiving Day; December 24, 25, 26, Christmas (3 work days granted.).

RETIREMENT SYSTEM SUMMARY OF RESERVES INVESTED — as of September 30, 1961: County Bonds, 4.94% of total or $14,609,014; Municipal Bonds, 5.20% of total or $15,371,364; U. S. Treasury Bonds, 45.40% of total or $134,199,111; Corporate Bonds, 37.17% of total or $109,870,606; U. S. Agency Bonds, 6.69% of total or $19,769,888; Public Housing Authority Bonds, 0.42% of total or $1,242,888; Farmer's Home Administration Notes, 0.18% of total or $531,357. A total investment of reserve funds of $295,594,228. The average yield was 3.81%.

MEMBERSHIP as of this date shows an increase over last year's total, with a present total membership officially reported to this office of 8,571. There are some others to be reported and it is to be hoped the additional increase will be sizeable. **THIS INDICATES** progress for the Association—let's resolve for the New Year to further increase our membership as of July 1 as we face another session of the General Assembly in 1963—just a few months away—and we need every resource to maintain our gains and to make further gains where possible.

A HAPPY AND PROSPEROUS NEW YEAR—and a healthy one—to each of you.

Otis Banks, Secretary

One of the most promising introductions to a lecture was made by a speaker who stepped up to the platform and said: "As I understand it, my job is to talk to you. Your job is to listen. If you finish before I do, I hope you will let me know."

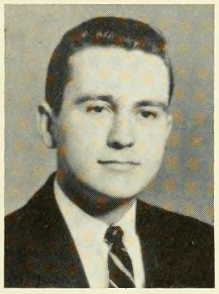
For people who can't eat between brushings, there's a toothpaste that contains food particles.

Joe says that after reading all the articles about cancer and smoking he has concluded one thing: Mice should not smoke.

The average housewife walks about 7.8 miles daily in and around her house. (Her electric switches shouldn't be so far apart.)

One reason so many children are seen on the streets at night is because they're afraid to stay home alone.

HIGHWAY MEN IN THE NEWS



Hatcher

Close cooperation with State Civil Defense Officials, the U. S. Bureau of Public Roads, and the Office of Defense Mobilization is a basic measure to insure public safety in the event of a national or local emergency or disaster. Like other State agencies throughout the United States, the North Carolina Highway Commission is represented on the State Civil Defense Committee. Emergency activities in which the Commission may be affected require careful planning and coordination.

Highway Divisions throughout the State have sent representatives to the Radiological Monitoring Course for Instructors in Brooklyn, N. Y. for schooling in Civil Defense methods. This school is sponsored by the Federal government.

Joe Hatcher, a Sixth Division engineer, who attended this school, was recently transferred to the Raleigh office to work with the Highway Commission in connection with Civil Defense. Hatcher, the son of Mr. and Mrs. J. B. Hatcher of Fayetteville, is a graduate of North Carolina State College and received a degree in Civil Engineering. He was a member of Chi Epsilon Honorary Fraternity, and Sigma Alpha Epsilon social fraternity. After three year in the Air Force, Hatcher returned to work for the Highway Commission as an engineer, working under Charles Land, Resident Engineer of the Sixth Division. In March, 1961, Hatcher represented the Division at the Radiological Monitoring Course.

Hatcher is married to the former Inez Owen and they have one son, Ben, age 2.

Fourth Annual Highway Conference

Governor Terry Sanford gave the opening address of the Fourth Annual State Highway Conference meeting in Raleigh from January 30 thru February 1, 1962.

More than 500 delegates and guests attended the Conference, which was conducted by N. C. State College, the North Carolina Highway Commission and Carolina's Branch, Associated General Contractors. The theme for the three day conference was "Workshops on Construction and Maintenance."

After the opening day's meeting which featured speakers from various fields of research and development in highway and contracting business, delegates attended group meetings relating to Construction and Maintenance.

Guest speakers included D. Grant Mickle, Deputy Federal Highway Administrator, Bureau of Public Roads, Washington; Dr. James W. Martin, Director, Bureau of Business Research, University of Kentucky; W. Harry VanderLinden, President, Carolina's Branch, Associated General Contractors; and J. M. Sprouse, Director, Highway Contractors Division, Associated General Contractors, Washington, D. C.

The following speech was presented by Highway Commission Chairman Merrill Evans at a luncheon on Wednesday, January 31:

ADDRESS BY HIGHWAY COMMISSION CHAIRMAN MERRILL EVANS AT FOURTH ANNUAL HIGHWAY CONFERENCE

NORTH CAROLINA STATE COLLEGE

12:00 Noon, January 31, 1962

I doubt if there could be found in all this State, a group more interested in the business of the North Carolina State Highway Commission than those of us assembled in this room at this hour. For that reason—if for no other—this would appear to be an appropriate time and place for a brief review of our highway situation—and a **look** toward the future.

The Highway Commission is in my opinion the most sensitive function of North Carolina Government. Just as our forefathers on this then comparatively undeveloped continent kept close to the land—so—in the pursuit of our present day livelihood we must keep close to our highways and, consequently, highway activity. Modern America moves on its highway system.

In my experience in government I have discussed highways with thousands of our people. I have found one man, just one, who did not want a hard-surfaced road by his home.

The road by a man's home, farm or business establishment—to that man—is the most important road on earth and those of us in highway business know he is deeply interested in it.

Since Secondary Roads present one of our major problems, perhaps we should review them first. North Carolina has approximately 58,000 miles of roads on the State Secondary System. This is the largest Secondary Road System under a single governmental control of any State in the United States. Of this 58,000 mile system, approximately 26,000 miles are paved and the remaining 32,000 miles are unpaved and largely unimproved. It has been estimated that it would cost approximately $600,000,000 to improve all of the unpaved Secondary Roads up to modern standards and to rebuild many substandard bridges on portions of the paved Secondary System.

An aspect of Secondary Roads that is usually overlooked is the fact that additional Secondary Roads are being added to the System monthly. Although the net increase in overall Secondary System mileage may appear to be low, particularly during periods of heavy annexation by municipalities, the Highway Commission generally is taking on Secondary Roads that are in need of major improvement and losing those roads that are paved and in good maintenance condition. North Carolina is a growing State. In the years to come, the Highway Commission is going to be called on to add more and more, not less, roads to the Secondary System. At the present rate of expenditures for Secondary Road construction, it will be at least 20 years before the statement can be made that the Secondary System in North Carolina has been constructed to meet the **minimum** levels that the people are demanding.

With practically no exceptions everyone living on an unpaved road would like to have the surface of that road changed from soil or stone to one of asphalt. Of course, it would not be feasible to attempt to set up a program to pave all Secondary Roads. There are several things to consider. One of these is the fact that maintenance costs are almost doubled for each mile of Secondary Road that is paved. Also, there has to be a sufficient volume of traffic using the road in order to keep the pavement "alive". If this traffic is not present, the pavements tends to become brittle and begins to disintegrate—thus in-

(Continued on Inside Back Cover)



NEWSPAPERS APPLAUD QUICK ACTION IN CLEARING SNOW-BOUND HIGHWAYS

The Fayetteville Observer printed this article on January 11, written by Bill Wright.

Since winter decided to come south four years ago, the Cumberland County State Highway Division has thrown apace in its efforts to tame the monster.

Winter really started dumping deep snows here in early 1959, and has kept up the habit.

One big result of those first snows was to bring Cumberland County's sunshine drivers to an almost standstill—while the highway department did its best to keep roads open.

While it worked it learned. At 3 A.M. Wednesday-as snow began falling here a comprehensive plan and a mass of equipment was thrown into gear. And the weather never had a chance.

Almost in amazement motorists found the county's main highway arteries not only passable but thoroughly open and biding travel as they emerged with daybreak.

The worst that can be said of roads during Wednesday's snow was that they were slippery-severly so on bridges. Traffic however, never skipped a breath.

The comforting thing about the Highway Commission's action is that it pummeled old man winter with a pulled punch. Its arsenal was not nearly emtied.

The plan triggered at that early hour Wednesday was a detailed battle plan, a result of four years of study and work. It also necessarily involved amassing of equipment.

For the past three summers-since the first big snow in 1959-highway Commission officials here have made and revised a plan that can send its men and machines into action on a moment's notice, as they did.

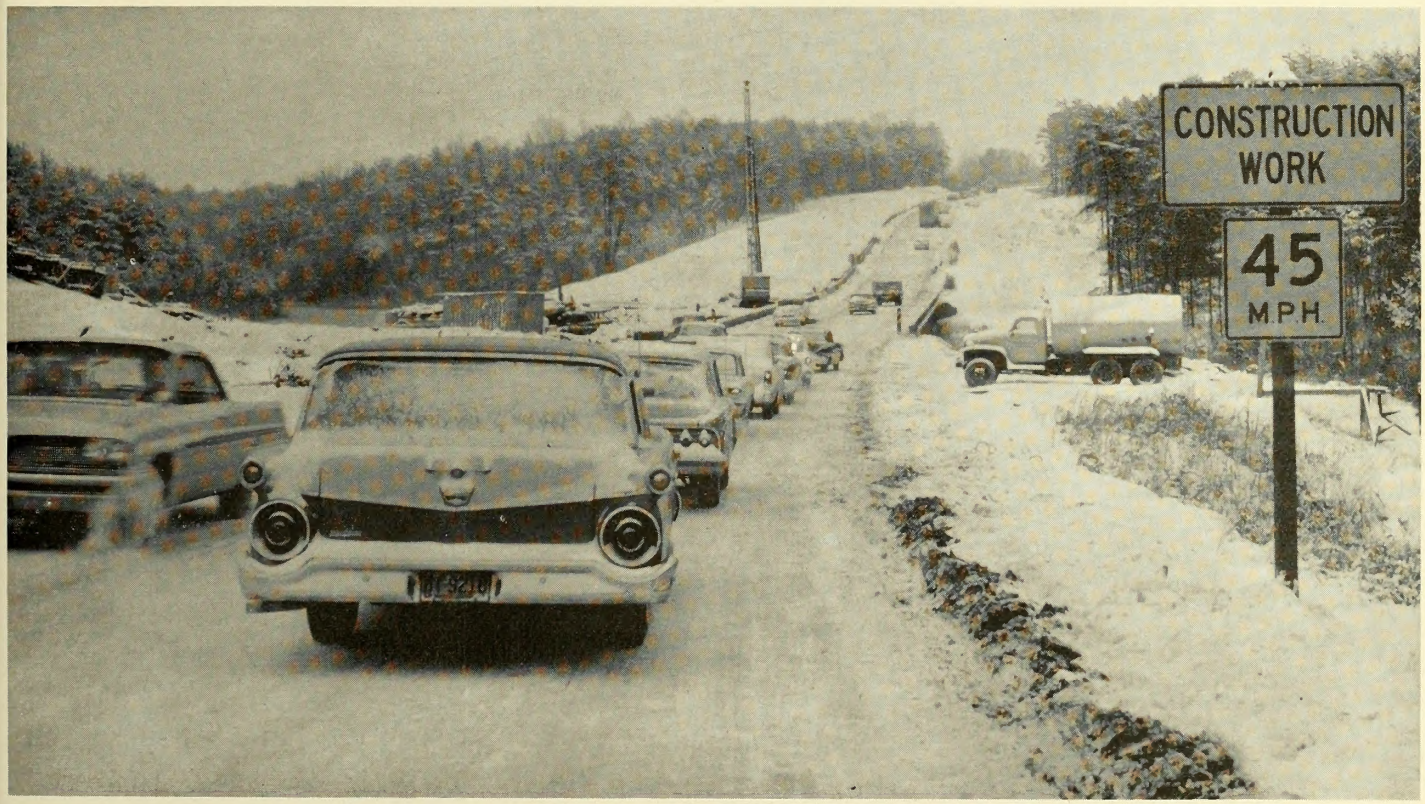
In this plan, which is mimeographed and distributed to each employee, each man is told what to do if snow starts falling.

Each worker knows months in advance exactly what machine he will man, and where.

The plan, while plotted three years ago, has undergone revision each summer as the Commission has acquired more equipment and learned more about the fight.

Equipment to keep roads open now totals 24 snow plows, 12 graders, two front-end loaders and four sand spreaders.

Sand spreaders were thrown into action at 3 A.M. Wednesday, and by 7 A.M. every piece was on the county's main highway.





That's not all. By an arrangement to rent other machines from contractors of the county the Commission can press a far larger number of graders and other machinery into action if needed.

Sam Wilson of the Commission looked over his equipment at work Wednesday morning, and liked what he saw. He saw the roads surfaces, almost clear of snow and slush and traffic going at near speed limits.

He also saw the only danger spots-the bridges, where ice forms more quickly than on open roads because of cold air under as well as over the bridges. The earth is warm, giving workers a break on the open road.

On the bridges, however, Wilson pointed to sand that had been thrown there hours before by sand spreaders cutting the danger of slipping.

First target of the department's plan is the heavily traveled main highways.

For the plan there is a single secret that means success or failure-getting an early start. Wilson and his crews were prepared to work throughout the night if the snow had lasted.

One object of the department's efforts is to get slush off the road before nightfall—because with it comes subfreezing temperatures-as indeed it did last night. Frozen slush creates a hazard worse than snow.

Wednesday's snow stopped about noon. Highway crews kept at the job until it was done. And they are ready to go again anytime the weather feels up to a second round.

SYLVA HERALD—January 18

UN-SUNG HEROS

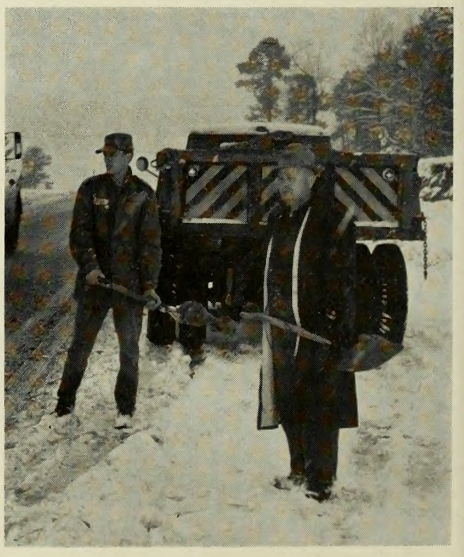
When that lovely white stuff (while falling), snow, that is starts late in the afternoon. . . . .most of us think mainly of getting home. . . . .and to sit comfortably by the fire or in our well-heated den or living-room.

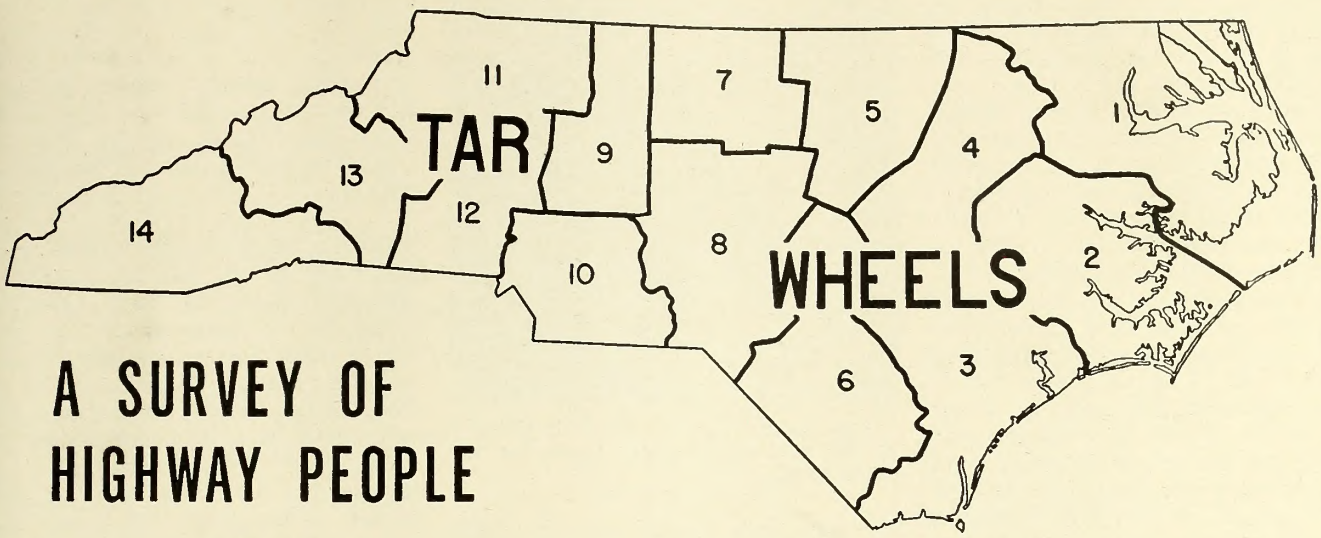
But do we ever think of those friends of ours, public servants, the State Highway maintenance crews, who begin warming up their snow plows and other road-clearing equipment for an all-night job of clearing the highways for our convenience of getting to work or that trip we have to make the next day, which would be impossible if the roads were not cleared immediately. . .

The Kernersville News ran the following editorial on January 4.

Maybe it is because of the Christmas spirit that has just passed, or is passing with the re-opening of schools and the beginning of a New Year, but we feel compelled to recognize the State Highway Commission this week along with our own street maintenance crew. Both of the groups did an outstanding job in clearing away a path for traffic during the snow the first day of this week. They were on the job early and kept up the work until the snow all but stopped. We attribute in a big measure the lack of accidents in this community during the snow to the splendid job these fellows did.

On the main highways through the Town, we of course, had the big heavy truck beating the snow to slush and a iding in the melting the beautiful but hazardous "flurries" as the weather man called the flakes that piled up in this area. But, at any rate, the State Highway workers didn't wait for days. .





A SURVEY OF HIGHWAY PEOPLE

HEADQUARTERS

By JEWEL ADCOCK

PHOTOGRAMMETRY — The Holiday Season has come and gone, bringing with its good cheer and festivities, the usual number of flu bugs, colds and snow. *Chester Gray* reports that "Sunny Florida" was not so sunny, but wet and cold on his Christmas visit to St. Petersburg to visit his parents. Photogrammetry continues to expand. New employees are *John Falkner, Don Holloway, Louis Wolf* and *Sue Howell.* John, Photogrammetric Aide, is a native of Oxford and was previously with the IATO Department of State College. Don, Highway Engineer, transferred from the Adjutant General's Office and formerly worked in Preliminary Design. Louis, a refugee from Havana, Cuba is working in the drafting section, and "old Santa" brought Sue Howell as a secretary for Department Head *Edgar Page* and *Chester Gray.* Sue is from Raleigh, having formerly worked with W. H. King Drug Company and Walker Martin. Congratulations to the *Mearle Meekins* upon their latest addition, with top priority, to the family staff—a son, Wesley. Fellow workers really miss *Charles Tate* and *Jim Pait* who recently returned to their studies at State.

BRIDGE—Proud parents of their sixth child, James Leo, born January 6, are Mr. and Mrs. *Jack Parker.* James is the fourth son and has two sisters. A very welcome and happy addition to the *Arnold Moore* family is a daughter Melisa Arnold, born November 21. Melisa is a "first". Congratulations to *Carl Kiger* who was married December 21 to *Linda Bailey* in Wake Forest. Home is 418 Wayne Drive in Raleigh. It's certainly nice to have *James Palmer* back at work after a long, serious illness. Everyone is happy about his return, especially *Arthur Barnett's* ("Barney's") Squad, since he was the missing member of the "fishing trip" gang. New trainees in Bridge Drafting are *John Ledbetter* and *Harold Landrum* from the Lab and *Steve Browning* from Construction. *Paul Burton,* a trainee, left to work with the Planning Department.

BRIDGE MAINTENANCE—Welcome to *Marvin McKinney* who recently joined the office staff. Marvin was formerly with the Bridge Maintenance crew at Spruce Pine. Best wishes to *Marjorie Messengill* who resigned to accept employment in the State of Virginia. *K. R. Scott* and wife enjoyed touring the Southern States during the Christmas holidays. Our heartfelt sympathy to *C. S. Biggs* upon the recent death of his brother.

ROADWAY DESIGN — *Martha* and Charles *Enscore* spent two weeks in Europe during the month of December —a week in Madrid, Spain, four days in Rome, and two days in "Gay Paris." The climate. in Madrid and Rome was warm and sunny with 70 degree temperatures during the day, but Paris was about 30 degrees during the day and very cloudy. The people were friendly, the food and wine excellent and champagne only a dollar a bottle in Madrid. However, they report at the "Lido" in Paris, champagne cost $18.00 a bottle. Martha and Charles had such a wonderful time

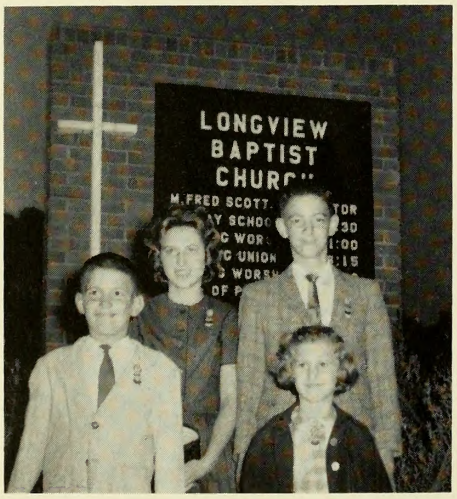


Right-of-Way employees gave Maxine White a lovely "stork" shower on her last day of work January 5. Standing back of guest of honor, Maxine, from left to right are: Pernell Garrison, Mary Murphy, Martha Bailey, Barbara Clapp, Sally Bunn, Alex Lee, Celia Truelove, Judy Bishop, Eleanor Brantley, Eleanor Taylor, Lib Talton, Trulah Page, Barbara Amick, and last, but not least, "Mr. Stork" himself on top of gifts.

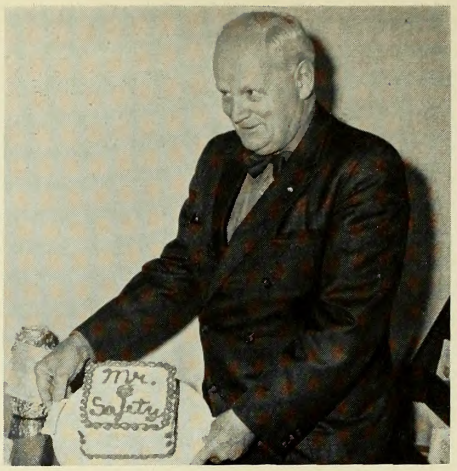
that they hope to return to Europe in the future for a longer visit. Trips during the Christmas holidays were numerous. *Clarence Frizzell* and family visited relatives in Sneedsville, Tennessee and Sylva, N. C. *Raymond* and Martha *Crouse* spent two weeks in Fort Lauderdale and Pompano Beach, Florida. *Orval Riffe* and family visited relatives in Beckley, West Virginia. *John Birdsall* and family went to see his father in La Grange, Georgia, and the *Bryan Moores* spent a week vacationing in Dayton, Ohio. Employees report a wonderful time was had at their Christmas party held at the "Black Steer". Sirloin steaks and dancing were enjoyed by all. *Kelly* and Jean *Barger* are enjoying their new home in Winter Park. *W. A. Wilson, Jr.* attended the Highway Research in Washington, D. C. January 8-12. New additions to the staff are: *William H. Krauss, John P. Taylor, Joseph O. Creech, Mohammad A. Jan, Kenneth L. Moore, Dallas C. Shearin* and *Clarence G. Deans*. Welcome to all of you! It's nice to have *Douglas Matthews* back at work after a six-month stint in service.

PURCHASING—Another "Sunny Southland" visitor, *Betty Ann Wilkins*, found Orlando, Florida rather chilly the week after Christmas while vacationing there with relatives. Purchasing, along with Central Files, Mail Room and Reproduction enjoyed a nice Christmas party on the 22nd of December. Presents were exchanged and refreshments were enjoyed by all.

EQUIPMENT—Welcome to *Mrs. Lydia Kornegay* who recently returned to the department in her old job as Mr. Upton's secretary. Best wishes to *Mrs. Nellie Barnes* who resigned January 12 to join her husband at his new job in Charlotte. Employees in the department presented Nellie with a lovely silver sugar and creamer on her departure. *Mrs. Judy Tomlinson* and her husband, J. W., spent the Christmas holidays in Englehard. J. W. was lucky enough to get away from the Air Force and spend the New Year holiday with his bride. Best wishes for a speedy recovery to *Betty Massengill* who underwent surgery at Rex Hospital on January 10. Our deepest sympathy to *John Lambeth* upon the recent death of his grandmother, Mrs. William D. Lambeth of Brown Summit, N. C.



BRIDGE DESIGN ENGINEER A. L. BARNETT is mighty proud of his children's Sunday School record. Timmy, age 10, Dixie 15, and Danny 13, each has six years' perfect attendance and little Diane, age 6, has the distinction of being present for five years of her short life.



"Mr. Safety", Tarvia Jones, is pictured at his retirement party given by the office staff.

Wedding bells helped ring in the New Year for Carey C. Muse, Jr. of the Mail Room and Dorris Jean Pearce, Accounting Clerk in the Construction Department. Carey and Dorris were married January 14 at the Franklinton Methodist Church, Franklinton, N. C. Carey's brother, Richard L. Muse, who is Director of the Baptist Student Union at Campbell College, officiated at the wedding. The couple traveled to South Carolina, and are presently residing in Raleigh.

PLANNING—Congratulations and best wishes to Mr. and *Mrs. Carl Kiger*, who were married on December 21. *Linda* was Mr. Burch's secretary and is now working in the Vocational Education Department of Public Instruction in the Education Biulding. *Carl* is an engineer in the Bridge Department. Welcome to *Mrs. Betsy Pendergraph* of Durham, who is Linda's replacement. *Dorothy Winfield* and her husband made a trip to Milwaukee, Wisconsin in December to visit Dorothy's sister. *Marie Jones* visited relatives in the Piedmont section during the first week in January. *Phyllis Nelson* went to both Washington, D. C. and New York during the holidays. (Mapping Section) Welcome to *Julia Capps* who is a temporary addition to the staff. During the Christmas holidays, *Connie Webster* took his wife to Florida, and *Mr. Rachel Gregory* with her husband and little son went to Mississippi. *Jimmy Barnes*, draftsman, will leave January 26 for six-months military service with the National Guard. Good luck to *John Welleman* who resigned January 19 to take a position with the U. S. Post Office in Raleigh.

RIGHT OF WAY—The annual Christmas party for the department was held December 15 at the Moose Lodge. All employees reported a wonderful evening which began with a big steak dinner, and followed by singing and dancing. The dancing began with a square dance and ended with the bunny hop, with a little twisting in between. Everyone seemed to enjoy the afternoon get-together in the office before Christmas when Santa Claus distributed the following gifts: a toupee, a twist record for the twisters, a get-rich-fast idea for the poor, which consisted of a pistol and a mask, metracal was distributed to the needy, cigarettes for the bums, a mirror for the primpers, and erasers for the ones who never make mistakes. All members of Right of Way would like to thank *J. G. Gibbs* for his generosity in presenting the department with a most enjoyable coffee break. *Trulah Page* is still trying to recuperate from her train ride up North during Christmas. She was the only one to enjoy a white Christmas. Employees will miss *Maxine White* who resigned to keep house. *Billy Hardison* recently left the department to join the appraisal section. *John Honaberry* was a little disappointed in his Florida trip during Christmas, because the polar bear had taken over the beaches. It's nice to have *A. Z. Williams* back at work after a stay in the hospital and at home for several weeks during his recent illness. Why isn't *Ernie Ransdell* going home for lunch as much as he used to? Rumors are *Bill Tomlinson* is looking for a wife. All applicants can reach him in Room 238.

LOCATION—*Jo-Ann Turner* and family spent the Christmas holidays in Winston-Salem with her relatives, and traveled to Elizabeth City after Christmas for a visit with her husband's family. *Louis High* and husband enjoyed entertaining her relatives over the Christmas holidays and his relatives during New Year's. *Boyce Midgette* was glad to have his son Butch, home for the holidays from Morganton. Christmas, Boyce and his family visited his home in Buxton. *France Smith* reports a wonderful time on her trip the week after Christmas visiting friends in Long Island, New York. Highlights of her visit were a tour of the Guggenheim Museum of Art and St. Patrick's Cathedral, as well as attendance of the Broadway play, "My Fair Lady".

The Data Processing Section misses *Ed Grady* who recently left to head a location field party out of Raleigh. Welcome to *Joe Creech*, a transfer from Photogrammetry, as Ed's replacement. Employees were glad to see *Johnny Davis*, former draftsmen, pay them a recent visit. All employees missed Department Head *Lloyd Cook* while he was out recently because of difficulty with his vision. *Gwyn Hester* spent Christmas in Oxford with her family. *Louise High* was glad to have her son, Roy Shelton, who is a dental student at Carolina, and his wife home for the holidays. (Property Survey Division) The *M. S. Cavanaughs* spent Christmas in Jacksonville visiting their parents. *Jim* and Judy *Duncan* were in Washington, D. C. visiting friends over the New Year's holiday. Welcome to new employees *Micheal Cross*, former State College student, and *Jere L. Lewin*, a former employee of the U. S. Geological Survey in Charlottesville, Va. and Charleston, W. Va.

BITUMINOUS—*T. V. Fahnestock* attended the Highway Research Board Meeting in Washington, D. C. recently.

SECONDAY ROADS—Welcome to *Gwyn Pritcher* who joined the clerical staff January 27, and is a trasfer from the Planning Department.

PROJECT CONTROL—Congratulations to *Carol* and Benny *Helton* upon the birth of a little daughter, Dana Paige, Nov. 19 in Rex Hospital. Carol returned to her position as secretary to Department Head Bill Ingram on January 2. Employees miss *Frank Price*, trainee, who left Jan. to join the Right of Way Office in Durham, and *Shanks Bradsher, Jr.*, trainee who transferred to Advance Planning. Welcome to *Phil Hefner* of Cary, new Administrative Assistant in the Department.

CHIEF ENGINEER'S OFFICE — Our heartfelt sympathy to *Virginia Hassinger*, upon the death of her brother, W. E. Smith of Los Angeles, California, on January 2. Virginia flew to Chicago with her sister where funeral services were held.

FEDERAL CONTACT — *R. R. Trevahan* enjoyed a recent weekend to Washington, D. C. to visit his son, Henry. He was accompanied home by several of his grandchildren.

LEGAL — Employees are glad to have *Frances Regan* of Raleigh join the staff as a new Stenographer.

PERSONNEL—It's nice to have *Eugene Olive*, new Personnel Analyst, in the Department. Prior to joining the Highway Commission, he was associated with North Carolina National Bank. Another welcome addition to the staff is *Joyce Clark* of Knightdale, new secretary who replaces Betsy Shelton Cook. Our deepest sympathy is extended to *Fred Parker* upon the recent death of his father, John Ray Parker of Norwood, N. C.

REPRODUCTION — Three new employees are welcomed: *McKaye Massey*, Reproduction Operator II, *Bobby Poole* and *A. L. Coggins*, Reproduction Operators I.

DIVISION ONE

By RAY WEST
Division Correspondent

PROMOTIONS: *C. C. Mathews* is the new Party Chief in the Location Department, replacing *R. M. Saunders* who was promoted to Area Locating Engineer; *Irvin Cullens* is now Inspector 2, promoted from Engineer Aide 2.

35 YEAR CERTIFICATES were recently awarded to brothers. They are *C. E. Stallings* of Elizabeth City and *J. S. Stallings* of Hertford, who are both Area Foremen IV.

HOLIDAY VACATIONERS were: Highway Inspector *Mark L. Lawrence* and his wife spent Christmas in Atlanta Georgia with relatives; Mechanic Foreman *M. C. Newbern* and his wife visited in Weldon and Winston-Salem; Typist Clerk *J. J. Rhea* visited Suffolk, Virginia; the *E. H. Baggs* vacationed for a week with relatives in Tampa, Florida; *T. C. Liverman* and his wife spent a few days in Four Oaks with relatives; *Lee Perry visited* relatives in Bailey; *P. L. Jackson* spent the Holidays in Jacksonville, Flordia.



MASTER TONY BRACY is all dressed up in his "Sunday go-to-meetin' suit". Tony is the son of Roger E. Bracy, Division One Office Manager.

HOME FOR THE HOLIDAYS: Robert Carroll Vanderberry, Jr. a student at the University of North Carolina visited his Mother, *Mrs. Nedra Vanderberry*, Stenographer in the District 2 office; Joseph Woodlief Collier of High Point College spent the holidays with his parents, *Mr. and Mrs. R. J. Collier* of Ahoskie—Collier is a Mechanic with the Equipment Department in District 2.

NCHPEA of Hertford County held a meeting on December 22 at the Equipment Shop at Union, and had their annual Christmas party afterwards.

CONDOLENCES to: *Robert L. Turner*, Prison Supervisor in Division One, who lost his father just before Christmas; *Mrs. Mildred Peele*, Stenographer, Who's brother died before Christmas; and *E. A. Walker* upon the death of his Father, Ernest Walker of Bell's Island, N. C. on December 8.

GET WELL WISHES to *W. H. Moseley*, Road Maintenance Supervisor and *W. G. Dowdy*.

CHRISTMAS FISH FRY was just the nicest way to celebrate the Holiday season, according to employees in District One in Elizabeth City who gathered for some fun on December 22.

DIVISION TWO

By ROY D. FRANKS
Division Correspondent

A BIG WELCOME to the following: *Mrs. Helen Darden*, who replaces Mrs. Joan Jordan; *Mrs. Ross Lee Peaden* Secretary in Appraisal; *E. M. Patterson*, who replaces *J. O. Sellars* of Right of Way; and *W. H. Everette*, Right of Way Department.

CHRISTMAS party goers in the Division Office had a big dinner and an evening of entertainment on December 15 in the Red Oak Christian Church Community Building. Division Engineer *C. W. Snell, Jr.* was Master of Ceremonies for the evening and entertainment was pro-



GOOD FISHING reports came in from J. K. Smith, H. I. II with the Construction Party in Kinston and Charles Nash of Grifton, N. C. who caught that line of speckled trout down at Topsail Beach during the Christmas Holidays.

vided by Mrs. *Leota Tyson* and her sister, Mrs. Lucy Allen.

BACK AT WORK after an illness is *Sibyl M. Smith*, Secretary in the Division Office. Glad to see you back!

WINTER VACATIONERS were: the *J. F. Pooles* and the *S. V. Catletts* in Florida; *G. P. Sanders* in Washington, D. C. who visited his daughter; Mr. and Mrs. *W. M. Edmondson* spent a week in Florida; the *Carl Whiteleys* had three weeks at home; and *E. T. Sutton*, MF IV went deer hunting.

RECUPERATING satisfactorily from a major operation in November is *Mrs. R. A. Merritt.*

CHURCH OFFICERS in their respective churches are these members of the Kinston Construction Party: *R. A. Merritt*, Sunday School Superintendent of Trinity Methodist Church; *J. K. Smith*, Elder, Pink Hill Presbyterian Church; and *R. J. Allen*, Deacon, Rivermont Presbyterian Church.

ON ASSIGNMENT temporiarily with the Right of Way Department is *J. B. Dawson*, H. I. II working out of Greenville.

RETIRING recently on disability was *Leonard Cunningham*, MF II in Greene County, effective January 1, 1962.

AFTER TWO MONTHS in Raleigh, *C. I. Lucas*, H. I. II has returned to the Kinston Construction Party.

GET WELL WISHES are extended to Retired Division Engineer *R. Markham.*

DIVISION THREE

By IRENE HEWETT
Division Correspondent

VISITING the Clinton District Office recently were *Blount Whiteside*, retired District Engineer, and *Thad Carroll*, retired Road Maintenance Supervisor. Carroll reported an enjoyable trip to Florida during the Christmas Holidays.

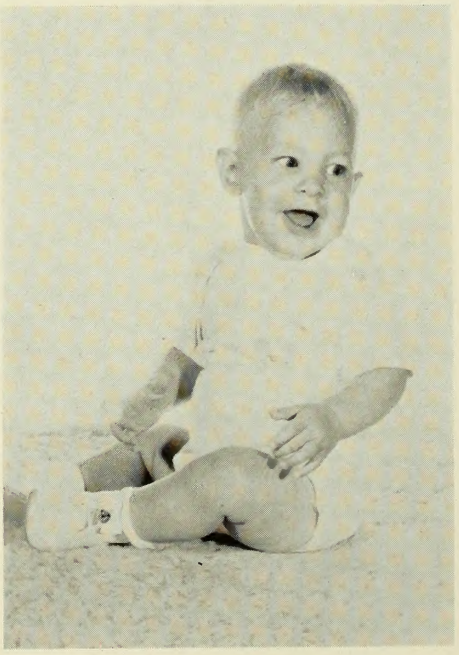
RETIREMENT will give *W. Tom Hall*, former Road Maintenance Supervisor for Hanover and Pender Counties a chance to catch up on one of his favorite pastimes —fishing. Hall, who retired in December, 1961, reports he is looking forward to devoting some of that free time to his hobbies.

WELCOME to *Allen Futreal* who is working in the Sign Shop. Allen transferred from the Equipment Department.

STORK STOPS: a daughter, Teresa, the third girl for the *Ralph Naylors*, was born January 10; a daughter, born January 9 to the *I. R. Easons.*

SYMPATHY is extended to the family of *R. S. "Bobby" Benson*, who was killed in an accident on December 24. Bobby worked under Resident Engineer W. C. Cooper in Construction.

HOLIDAY TRAVELERS: *Mrs. Leo Wallace* went on vacation to visit her sister in Jacksonville, Florida; and *Mrs.*



SMILING for a proud Grandad is Master Paul Weston Clemmons, grandson of Hardy Weston Clemons, Maintenance Foreman in New Hanover County.

Minnie May Smith, retired Stonographer 2 in the Clinton District Office ,is visiting with each of her three daughters— one in Richmond, one in Pittsfield, Mass., and one in Chicago, Ill.

WE WILL MISS *Zeb Worley* of District One who separated on January 3 due to ill health. Also, *H. A. Horrell* retired in December on Disability. We hope these people will come by and see us often.

ON THE SICK LIST: *Elliot (Bing) tew; F. R. Riley;* and *D. L. Carter.*

ABOARD the Battleship U. S. S. North Carolina recently was the family of *J. P. McArthur.* His three daughters, Brenda, Betty and Bobby Lou, and lovely wife Bobby were in Wilmington and while there visited several Right of Way members. McArthur is Righ of Way Aide I, and resides in Wakulla, N. C.

NEW ROAD Maintenance Supervisors are *Bill Lumsden*, New Hanover County; *G. E. Rackley*, Sampson County; and *Clayton Carter*, Pender County.

RIGHT OF WAY is pleased to have *Mrs. Gwendolyn Wilson Herbst* as a Stenographer I. "Gwen" is married to Carl Herbst, A2/C, and they have one son, Jeffrey, 3½ months old. They now reside at Kure Beach.

DIVISION FOUR

By MRS. JERRY BOYKIN
Division Correspondent

CHRISTMAS festivities were in full swing throughout the Division. Employees in the Division Four Office held their annual Christmas party December 19 at the Cherry Hotel in Wilson. About 50 people attended the dinner and dance. Also included on the menu was bingo, exchange of presents, and even a litttle "Twisting" by braver souls! Those presents were in many cases, Out of This World!!

A LADIES' NIGHT Christmas Party was held in the Johnston County Maintenance yard on December 8. In Wayne County, their Chapter of the North Carolina State Highway and Prison Employees Association held a Family Night in the new Meadow Lane School in Goldsboro on December 15. Entertainment for the 253 present included Yo-Yo contests for the children, songs by little Diane Bailey, door prizes and ballon bursting contests. Former Senator Hardy Talton was winner of a "Hog-Calling" Contest with Division Engineer E. P.



LET'S DO THE TWIST like we did last summer! ! ! ! During Christmas J. G. Matthews and a young friend "twist" at a Wayne County partp.

Koonce, Assistant Engineer R. W. Dawson and Wayne County Sheriff, Jesse Hinton.

STORK NEWS—Born to Mr. and Mrs. *Harvey Jernigan*, a girl Connie Jo, on October 6; Born to Mr. and Mrs. *Eugene Lane* on October 20, a girl, Phillis Ann; Born to Mr. and Mrs. *W. C. Price*, a girl, on October 14.

HOME FOR THE HOLIDAYS were: *Arthur Ferguson's* Mother from New York; the son and daughter of *Tom Wilkins*, visiting from Hampton and Portsmouth Virginia with their children; and Mildred Dawson, daughter of the *R. W. Dawsons*, who was home from WCUNC for Christmas.

VISITING relatives over the Holidays were: *Jerry Boykin* and family who went to Erwin and Dunn; and *Mrs. Betty Simon*, Division Four Stenographer, and husband Don who visited in Pennsylvania.

WELCOME to *Mrs. Gloris Morris* who recently joined the Right of Way.

ON THE SICK LIST: *C. W. Turner; E. D. Herring; W. D. Phipps; R. J. Lee; J. C. Massengill; J. F. Edwards;* and *K. E. Jackson*. Mrs. William Phipps is home after more than a month in Wayne Hospital, Goldsboro.

CONDOLENCES to *Preston E. Lane* and his family in the death of his sister, Mrs. Anne Lane Crosby of Saratoga, on December 16. Mrs. Crosby is survived by her husband, James K. Crosby, and two children.

WELCOME to *Emmett Blackshear*, Mechanic II at the Division Shop, and *Miss Frances Sullivan*, Steno II at the Division Shop who has replaced *Mrs. Mabel Askea*. Mrs. Askea retired last July.

RECOVERING from an automobile accident last November is *Bruce Ferrell*. *Luther Pierce* has been ill for several weeks. We hope both are doing fine, and best wishes for a speedy recovery.

A CHRISTMAS SUPPER on December 22 was the climax of the Christmas Season at the Shop.

HUNTING over the holidays was a real enjoyment for *J. P. Brewer*.

"MAN'S BEST FRIEND" wasn't too friendly to *W. G. Cooper*, *S. L. Harlow*, and *B. H. Crawley*. All have recently suffered from Dog Bites!

CHRISTMAS VACATIONERS *F. H. Edwards* and his wife went to Oklahoma during the holidays to visit their son David and his family; in New York was *George Eason*, District 2 Highway Engineer, and his family.

MANY HONORS have been received by Carolyn Yount, daughter of *M. P. Yount*, Nash County Maintenance Foreman. She was recently a delegate to the National Lutheran League Conference held at Columbus, Ohio, and now Chairman of the State Lutheran League Convention to be held this summer. Carolyn is a Senior at Lenoir-Rhyne College, Hickory, N. C. and is majoring in Business Education.

BACK AT WORK after recent illness are *H. L.Braswell* and *N. S. Murray* with Nash County Maintenance and *R. L. Brown* who works with Wilson County Maintenance.

WISHES for an early recovery are extended to *Mose Backley* who was injured recently while operating farm machinery.

WELCOME to *Robert Joyner*, clerk in the Nashville District Office and *Harold Colston* with Engineering Training Program who will be at the Nashville District Office during the maintenance phase of his training.

DIVISION SEVEN

By P. L. WELCH
Division Correspondent

BABY NEWS — The *C. W. Greesons* have a boy, born January 8; and The *W. M. Gunns* announce the birth of a son, born October 28. Congratulations!

CONVALESCING are: *R. S. Thomas*, Maintenance Supervisor in Guildford County, after a recent operation at the New Wesley Long Hospital in Greensboro; *Mrs. L. D. Highfill*, at home, after being at Cone Hospital and Wesley Long Hospital; *E. M. Coley*, who was recently in Baptist Hospital in Winston-Salem; and *C. M. McGehee*, recuperating from an operation in December.

BACK AT WORK is *C. M. Jones*, Area Foreman in Guilford County, after a stay in Cone Hospital.

SYMPATHY is extended to the family of *C. O. Farris*, former Rockingham County employee, who passed away in January.

DIVISION EIGHT

BY VIRGINIA WILLIAMSON
Division Correspondent

BABY GIRLS are recent arrivals at the homes of: Mr. and Mrs. *Carl Cheek*, Sign Department; Mr. and Mrs. *Johnnie Harrington*, Construction; and the *Mauyer Hancocks*, District Three.

BABY BOYS are creating blissful chaos in the homes of: the *Joe Lanes*, Sign Department; the Garlton Moores, Construction Department; Mr. and Mrs. *Henry Jordan*, Assistant Division Engineer.

FELLOW EMPLOYEES are certainly going to miss *Lee J. Strider*, Machine Operator, District Three, who retired December 31, 1961. Strider began his service with the Commission in 1936. We wish him a most happy and prosperous retirement.

SYMPATHY is extended to the family of *Curtis Britt*, Montgomery County Employee, who passed away in November, and to the family of *Ottis Hair*, Road Oil Employee, who died in December.

VACATIONING in Denver and Colorado Springs were the *Truby Clarks*. Clarks is a Highway Inspector with the Construction Department.

ROAD OIL SUPERVISOR *J. L. Riley* is the proud grandfather of Miss Pamela Ann Hammer. Pamela's mother, Sheila Hammer of Siler City is the Rileys only daughter. And to top it all off, Pamela, who was born on December 31, has the same birthday as her cousin Debbie Riley, the only other grandaughter in the Riley family.

AT HOME after a bout with the flu is *John Hall*, District Engineer in Asheboro. We wish him a speedy recovery.

REPORTING for duty January 16 was *Walter Parsons*, who is on reserve duty for six months with the Coast Guard at Cape May, N. J. Parsons, who was with the Rockingham District Office, expects to complete his college education at Wake Forest College after the six month stint with the Coast Guard.

GOOD LUCK to *Eddie Darden*, son of District Engineer E. C. Darden, who has accepted a position as Administrative Trainee with Jefferson Standard Life Insurance Company of Charlotte.

WEDDING BELLS rang out recently for Shirley Patrick, daughter of Landscape Foreman *Douglas Patrick* and Mrs. Patrick.

EMPLOYEES of Division Eight were saddened by the sudden passing of *S. P. Swaringen*, who has been with the Highway Commission for almost 40 years. Swaringen was District Engineer in Aberdeen for the past seven years. and we extend our deepest sympathy to his family.

DIVISION TEN

By C. E. COLLIER
Division Correspondent

WEDDING NEWS: Miss Janet Lowder of Clemmons and *Carl Raymond (Buddy) McCorkle* were married in Amity Presbyterian Church on Sunday, November 19. Buddy is the son of P. R. McCorkle, Division 10 Equipment Superintendent. While attending college, Buddy worked with the Construction Department during the summers.

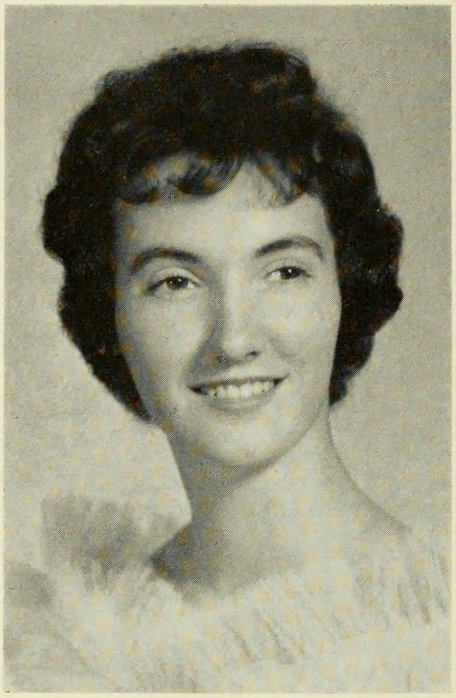
THE LAST safety meetings be held in this Division before the retirement of Safety Office Tarvia Jones were held at the Union County Maintenance Shed in Monroe on November 30; and a meeting in Charlotte in the Assembly Room on December 1, 1961. Employees of the Maintenance, Equipment, Construction, Sign and Location Departments were present. Both of these meetings were well attended and the talks delivered by Jones were interesting and inspring.

STORK STOPS resulted in: a second son for *Fred Payne* in December; a son Brian Duke to Mr. and Mrs. *Roy B. Edwards*, December 2, 1961; and a daughter, 7 lbs., on January 9, 1962 to the *Dudley McSwains*.

HOLIDAY FESTIVITIES: a barbecue supper in Charlotte for the Huntersville Group, December 16; the Steele Creek Group had a baked ham dinner in the Charlotte Assembly Room, December 16; Union County celebrated the Yule Season with a barbecue supper in Monroe on December 9; the Equipment Department had a gala barbecue at the Charlotte Shop on December 20; Stanley County employees and families held their annual Christmas party on December 21; and Cabarrus County employees and families held a pork barbecue on December 22.

ON THE SICK LIST: *George H. Hannah; A. J. Linker; M. A. Smith;* Road Oil Supervisor *W. T. Smith; Henry S. Campbell;* and *H. R. Shelton.*

HOLIDAY TRAVELERS were: The *J. G. Allisons* who visited their daughter and her family at Myrtle Beach; and the *Wiley Dosters* who visited a sister at Winter Gardens, Florida.



ELGENIA SNIPES has been selected as one of twenty-two seniors to represent Furman University in the 1962 edition of the National Who's Who in American Colleges and Universities. Selection is made on the basis of scholartic ability and service to the college. Miss Snipes is an English Major and a History and Psycology Minor. She has served on the Student Council, was Chairman of the 1960 Furman Follies, is Chairman of Senior Order, a member of Social Standards Board and Treasurer of the Pep Club.

She is the daughter of Highway Engineer Mr. and Mrs. Carl Snipes of Concord, N. C.

DIVISION ELEVEN

By CORA LEE GREER
Division Correspondent

EVERYONE was saddened by the unexpected death of Road Maintenance Supervisor *R. E. Richardson*, a Highway employee for thirty years.

SYMPATHY is extended to *J. C. Newman* upon the recent death of his father; and to the family of *Tommy Farmer*, truck driver, who was killed in an accident on December 11.

GET WELL WISHES to *D. D. Duncan, A. S. Haney,* and *R. W. Collins.* Back at work after illness are *H. F. Davis* and *F. L. Casstevens.*

NEWLYWEDS: Engineering Aide I *Bobby Taylor* and Patricia Handy were married recently at Antioch Baptist Church in Mt. Airy; and Highway Engineer II *J. F. Bivins* was recently married to Miriam Fyock. Both Taylor and Bivins are employed with the Construction Department in Elkin.

HOLIDAY HIGHLIGHTS—*R. A. Moser*, Maintenance Yard Foreman, went to the coast for some fishing; Mr. and Mrs. *J. P. Higgins* spent Christmas visiting friends in Florida; and employees of the Elkin Shop and District Office enjoyed



MISS WILKES COUNTY, Grace Dean Walsh, has been chosen Miss Missileteer at Patrick Air Force Base, Cocoa Beach, Cape Canerval, Florida. Miss Walsh is the daughter of Maintenance Foreman II and Mrs. W. W. Walsh.

a barbecue dinner at the Highway Shop on December 22; the Construction Party held their party at the Moose Lodge in North Wilkesboro, and with some forty people trying out the "twist", the place resembled the peppermint Lounge!

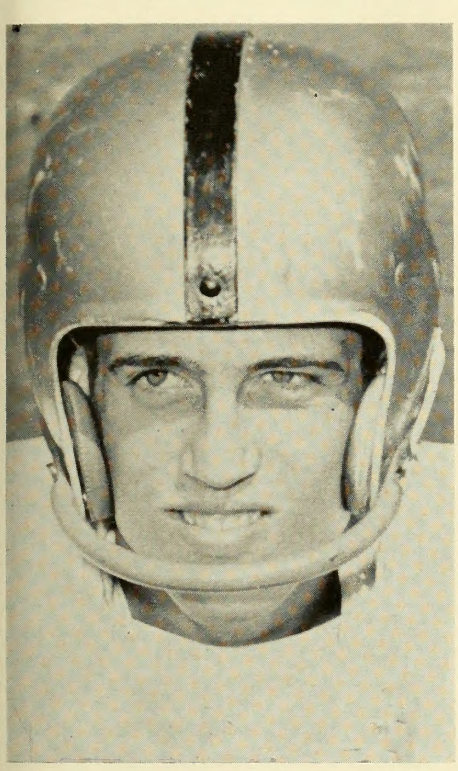
DIVISION TWELVE

By JEAN CLINE
Division Correspondent

NEW HOME OWNERS are *Frank Wagner*, and *Charles Manuney*.

THUNDERBIRD owner *Mayo Morehead*, Secretary in the Right of Way Department is very proud of her new car!

NEW EMPLOYEES in the Equipment are: Wayne D. Miller; Claude C. Jones; Charles H. Tallent; and Judson L. Hastings.



STAR QUARTERBACK Charles Noggle, son of Area Foreman Ervin Noogle of 900 Blanton Street, Shelby, has signed a grant-in-aid scholarship to North Carolina State College.

Young Noggle, an all-round athelete in football, baseball and basketball, was named to the Greensboro Daily News All State team, and was earlier picked as a member of the Charlotte Observer All State team.

An Honor Roll student, Noggle had 15 scholarships offered to him, but chose State both for scholastic and athletic advantages as well as academic opportunities for a forestry major.



COMMISSIONER MURRAY TATE, District Engineer P. J. Corpening and Maintenance Supervisor L. D. Gaither look on with interest as C. A. Poovey tries out, with smiling approval, a gift from fellow employees gathered at a retirement party for him.

SICK LIST: *T. F. Walker*, District 1 employee; Bobby Royster, son of *T. A. Royster;* Mrs. *T. A. Royster* wife of *T. A. Royster;* twin daughters of *C. L. Scism;* Patricia Wellmon, daughter of *F. E. Wellmon; A. B. Morrison;* the son of *H. E. Travis; Mrs. J. W. Wray; R. E. Seitzer; H. H. Austin; C. E. Summers; Mrs. W. R. Tilley; Mrs. J. T. Stikeleather; Mrs. C. D. Jenkins; Mrs. John Bradburn;* and *Ned Lewis.*

HOLIDAY VACATIONERS were: The *Morris Runyons* who went to Florida; Resident Engineer *W. A. McNeill* and his wife went to Americus, Georgia; *E. R. McGimpsey*, retired employee, visited in St. Petersburg during Christmas and January; the *Carl Allens* spent Christmas in Georgia.

NEW ARRIVALS: a son, Philip Jackson, born November 27 to the *J. J. Beams*, Shelby Construction Party; a daughter, Leigh Ann, born December 6 to the *H. K. Eades*, Division Right of Way Agent; a grandaughter, Winnifred Louise Corpening, District Engineer and Mrs. *P. J.* Corpening on December 12 in Cleveland, Ohio; and a daughter, Beverly Joanne, born to the *B. D. Gilberts*, District One employee.

THREE EMPLOYEES retired in District One during 1961: *L. H. Barrett* of Cleveland County who retired December 15; *F. H. L. Abernathy* of Gaston County who retired October 4; and *J. P. Sellers* of Gaston County who retired October 1. These men are to be commended for faithful and loyal service given through their many years of work with the Highway Commission. A Happy Retirement is wished to each.

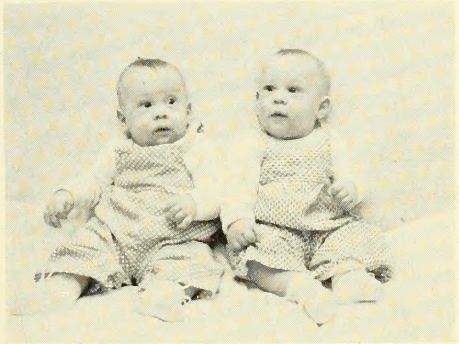
HIGHWAY CONFERENCE material will be noted by four Statesville employees: *Frank Wagner; Charles Mauney; Richard Danner;* and *Wade Harbin.* The Conference will be held in Raleigh in February.

WELCOME to *Charles Matthis* recently transferred from North Wilkesboro, a Wilmington Junior College graduate from Clinton who is a technical Engineering Trainee with the Location Department; and *Bob Adams* who has joined the Statesville residency since the last publication of ROADWAYS.

CHRISTMAS PARTIES: a barbecue supper for the Catawba County employees and families at the Newton Armory—District Office personnel attended and Commissioner Murray Tate was introduced, and later O. R. Rockett who retired was presented a Certificate of Service; Iredell County employees and their families gathered at Monticello School Cafeteria for their annual barbecue Christmas supper December 15; Cleveland County employees and families-223 strong held a barbecue supper on December 15 and Mrs. R. E. Laidlaw conducted games for the children; Division Office Building employees held their annual Christmas Party at the Elks Club at Shelby with about 75 in attendance.

WELCOME HOME to *D. E. Jones* who returned from a six month tour of duty with the Army at Fort Leonard Wood, Mo.

BEST WISHES TO *R. F. (Bob) Abernahty, Jr.*, who will enter Gaston Tech this spring to major in Civil Engineering. Also Congratulations to him upon his marriage last November 26.



SEEING DOUBLE? These young lookalikes are Mark William and Clark William, twin sons of Mr. and Mrs. W. E. Holcomb of Trontman, Holcomb is a shovel operator in Iredell County.

DIVISION FOURTEEN

By D. V. RAXTER
Division Correspondent

A SPECIAL Life Saving Award was presented to *Wayne C. McClung* Maintenance Foreman 3 in Graham County by H. D. Tarvia Jones, Retired Engineer of Safety, and an American Red Cross Field Representative, Mrs. Ruth Lockman.



Pictured receiving a Special Life Saving award is Wayne McClung. Left to right: Former Safety Engineer Tarvia Jones; Mrs. Lockman; McClung; and A. J. Hughes, Assistant Division Engineer.

WEDDING BELLS rang out for *John C. Colville*, Right of Way Department and Edith Wilson of Bryson City. The wedding took place in the Methodist Church, Bryson City, on November 23. The couple went to Miami, Florida, for a honeymoon. Best wishes to you both!

RECUPERATING now are: *C. W. Constance*, Maintenance Foreman 2 in Polk County; *James E. Head*, Maintenance Foreman 2 in Haywood County since the latter part of November due to illness; *R. B. Hall*, Maintenance Foreman, Polk County; Mrs. Alonzo McGraw, wife of *Alonzo McGraw*, Powderman in Henderson County.

WINTER VACATIONERS were: *R. B.* Johnson, Maintenance Foreman 4, Henderson County who spent two weeks in Florida; and *S. F. Davidson* and family who spent their vacation in Daytona Beach, Florida.

WELCOME to *Porter Scroggs* and *J. M. Taylor* who have recently joined the Right of Way Department.



SNOW BREAK time for employees of the Division Fourteen office. Left to right: C. L. Proffitt, Assistant Road Oil Supervisor; Porter Scroggs, Right of Way Aide; Joyce Bryson, Stenographer II; A. J. Hughes, Assistant Division Engineer; J. F. Bryson, Sign Supervisor; and Don McCracken, Right of Way Aide. Not pictured was Photographer D. V. Raxter, Division Office Manager.

W. H. TAYLOR RETIRES

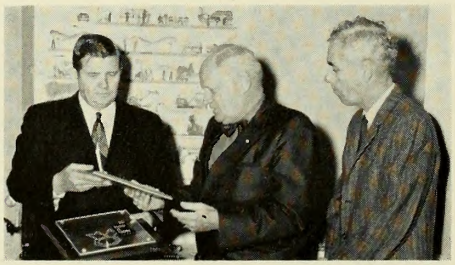
"So Bill—we'll miss you. We wish you the very best of everything. Good health, long life, lots of naps and no maps—"

J. S. Burch, State Planning Engineer, and employees of the Planning Department "planned" a fine retirement for W. H. Taylor who retired from the Highway Commission on December 31.

Taylor joined the Highway Commission in 1922 as a chairman on Construction, was promoted to Rodman in 1925, and Instrumentman in 1926. He worked for Wythe Peyton, Consulting Engineer in 1927 at Fontana, with Zeb Stewart at Mocksville in 1928, and with Hunter Irving at Southern Pines and Reidsville in 1928 and 1929.

After working with the Tenneessee and Louisiana Highway Commissions, he returned to North Carolina in 1934 as Instrumentman on Construction. In 1938 he was transferred to Raleigh as a Draftsman in the Planning Survey Department under J. S. Burch.

Taylor is married to the former Dixie King of Topton, D. C.



During the retirement party for Safety Engineer Tarvia Jones, two Safety Plaques were awarded. Receiving the plaques, left to right: Governor Sanford, Jones, and Herbert H. Hardy, new Safety Officer. The plaques have been placed in the Commission room.

AREA APPRAISER

"Gene" White Area Appraiser from Asheville was elected president of the American Right of Way Association Chapter No. 31 for 1962. The elections were held in Rock Hill, South Carolina. White succeeds Joseph L. Walker, M. A. I., Assistant Right of Way Engineer of the South Carolina Highway Commission. During 1961, White served as Secretary-Treasurer while W. H. Webb, Jr., Chief Right of Way Engineer for the North Carolina State Highway Commission was serving as a National Director of the Association.

White, a native of Cleveland County, joined the Highway Commission 11 years ago as a rodman with the Location Department. He later transferred to the Location Department. He later transferred to the Right of Way Department, working out of Sylva and Shelby Division Offices. In recent years he became Area Appraiser for Area III of the Appraisal Section of the Right of Way Department.

Get Up and Go

How do I know my youth is spent
Well, my get up and go has got up and went
But in spite of it all, I am able to grin,
When I recall where my GET UP has gone.

Old age is golden, so I've heard said,
But sometimes I wonder when I get into bed
With my ears in the dresser, my teeth in a cup
My eyes on the table until I wake up.

Ere sleep dims my eyes, I say to myself,
Is there anything else I should lay on the shelf?
And I am happy to say, as I close the door,
My friends are the same, perhaps even more.

But I really don't mind when I think with a grin
Of all the grand places my GET UP has been.
Since I have retired from life's competition,
I busy myself with complete repetition.

I get up each morning and dust off my wits,
Pick up the paper and read the obits.
If my name is missing, I know I'm not dead,
So I eat a good breakfast and go back to bed.

(Author Unknown)

(Continued from Page 6)

creasing maintenance problems and maintenance costs. It has generally been accepted that a traffic volume of 50 vehicles per day should be the general minimum traffic selected when paving a road.

There are approximately 10,000 miles of unpaved Secondary Roads carrying traffic volumes greater than 50 vehicles per day. These figures are accumulated from traffic inventories made annually. These figures range from a high of from over 300 miles in some of our larger counties down to less than 20 miles in some of our smaller counties. It is estimated that it would cost from 200 to 250 million dollars to pave the 10,000 miles carrying traffic volumes in excess of 50 vehicles per day.

The Secondary Road construction program that will be carried out in North Carolina during the 1962 construction season will be the largest since the days of the bond program. In addition to the annual Secondary Road construction funds that have been available for the past few years, Governor Sanford allocated from Highway Surplus additional appropriations for Secondary Road construction of over $7,000,000. A high percentage of the funds available for Secondary Road construction will be used to provide more paving.

Highway Safety—or the absence of it—is a subject much in the minds of the people of our State today. It is a complex problem, one that to this date has defied solution.

It is an established fact that highways built for the days of the Model T are not safe and sufficient for the automobiles of the sixties.

On our NC and US numbered highways, we have in North Carolina today 3,014 miles of hard-surfaced roads in the 16 and 18 foot class. By all standards, these roads are unsafe for today's traffic and contribute heavily to the toll of traffic fatalities.

I have with me today a large map of our State Highway System. The map sets forth the roads yet remaining 16 and 18 feet.

These roads are in the East, West, North and South—in the Coastal Plain, in the Piedmont and in the Mountain Counties. On these roads are bridges too narrow for cars to meet, curves dangerously sharp and grades which render passing hazardous.

Please bear in mind these are not in the Secondary Road Class. They are our US and NC numbered highways.

It might be of some interest to note that we still have unsurfaced 86 miles on our NC numbered highways.

In addition to these 3,000 miles of NC and US numbered highways in the 16 to 18 foot class, we have 9,000 miles in addition in our Primary System—or a total of 12,000 miles of Primary Roads.

The needs of the 9,000 miles of additional highways on our Primary System are tremendous because of the rapid increase in vehicle traffic.

Within the next five years at least 1500 miles of the Primary System will be reaching traffic capacity with resulting congestion. These roads will need to be widened from their present two-lane alignment to four-lane divided facilities. In many cases, land use along these highways will make such widening impossible and these roads will have to be relocated.

It is estimated that the cost of improving the Primary Highway System to minimum standards over the next 10 to 12 years would amount to 750 million dollars.

In order to provide more efficient travel for through movements and to eliminate congestion in our cities and town, many bypasses are imperative.

If we are to preserve the effectiveness of our Primary System, we must place more emphasis on controlling access along these highways.

It is a proven fact that as land use builds up along these highways, their ability to handle traffic decreases and the accident rate goes up.

A four-lane highway without control of access or median strips is eight times as dangerous as one of our new Interstate controlled access facilities.

The Highway Commission does not have money in sight to make all of the needed improvements to the Primary System and will be fortunate to hold even its present position when increasing traffic and rising costs are taken into consideration.

To this point I have been talking about highways that, in one form or another, already exist.

We should always keep in mind that our highway system is not complete. Many of the finest natural resources of this entire State are yet beyond the stretch of any form of all-weather highway.

Over in Cherokee County in the direction of Telleco Plains, Tennessee, there is an area of several thousand acres of undeveloped mountain country—undeveloped because the mountains have no highways. Ford Times—the monthly publication of Ford Motor Company has called this the largest single area of undeveloped natural resource in America. Tennessee has promised to come to the North Carolina line. We have not as yet agreed to meet them.

Here is an area comparable to the Great Smokies in natural beauty, but since it has not been pierced by highways, it is inaccessible and undeveloped.

The highest waterfall in eastern America is in southwest North Carolina. We know it as Whitewater Falls. It is one of the natural beauty spots of the Nation. South Carolina has built a road to within one mile of it, but that last mile is in North Caarolina. To get to Whitewater Falls over an all North Carolina road, we would have to surface 10 miles of Mountain roads and that would cost at least a million dollars.

North Carolina, together with Florida and Maine, has the most marvelous seacoast on the Atlantic seaboard, but a high percentage of our seacoast is inaccessible because of the lack of roads.

Our seacoast—when one day it is developed—will be a tourist asset and attraction comparable to our mountain community, but this development cannot come into being without roads.

There is scarcely a month in which the Highway Commission does not hold a public hearing in communities with major natural resources yet untapped because of lack of any all-weather highway facility. We have held such hearings in Plymouth, Oak City, Brevard, Elizabeth City, Southport and other points. Our citizens in these undeveloped areas are pleading for help that can come only with the construction of highways and the building of bridges.

The Scotch Joke: There are many jokes describing the thriftiness of the Scotch, yet, believe it or not, a Scotchman originated the custon of tipping. Here are the facts: In the early days the English railroad trains stopped at stations for meals. Naturally, the travelers had to dine quickly. And once a Scotchman placed a sixpence beside his plate to attract attention of the waiter. The habit spread quickly and soon the owner of the traven placed a sign over the door, reading: "To insure prompt service, pay the owner." The first letters of the words "To insure prompt service," make up the word "Tips."

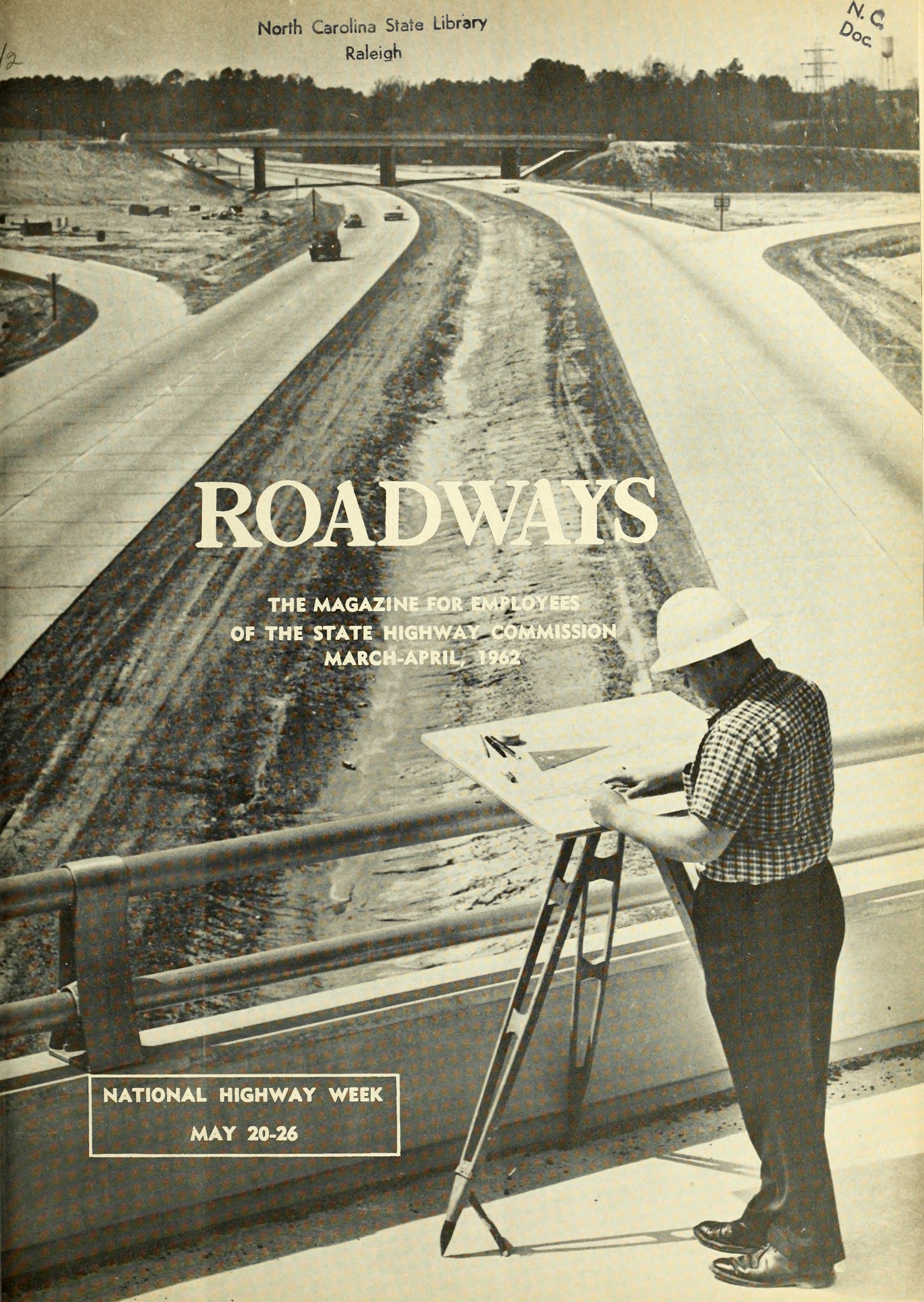


Governor Sanford and a group of Scouts ride on the last ferry trip across the Alligator River. The $3 million Lindsay C. Warren Bridge spans the background, offering tourists and residents of the area free, time-saving travel in coastal North Carolina. (Photo courtesy Bob Allen).

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ROADWAYS

THE MAGAZINE FOR EMPLOYEES
OF THE STATE HIGHWAY COMMISSION
MARCH-APRIL, 1962

NATIONAL HIGHWAY WEEK
MAY 20-26

Gala Celebration For Warren Bridge Dedicated – May 10

Final celebration activities were completed during the dedication ceremonies of the bridge spanning the Alligator River.

Lindsay C. Warren, Congressman and former Comptroller of the United States, was the unanimous choice in the selection of a person after whom the bridge would be named.

Warren was honored at the bridge dedication ceremonies on May 10, beginning at the western terminous of the bridge with the unveiling of the plaque, by his granddaughter. The official program was held in Columbia, N. C.

Among the participants on the program and special guests were Senator Warren, Congressman Herbert C. Bonner, Governor Terry Sanford, Highway Commission Chairman Merrill Evans, Raymond Bryan, President of T. A. Loving Company, contractors for the bridge, and Harry Vanderlinden, President of Associated General Contractors in North Carolina, the 18 members of the present Highway Commission, former Chairman J. Melville Broughton, Jr., and the members of the preceding Highway Commission who programmed the building of the bridge.

The Cover

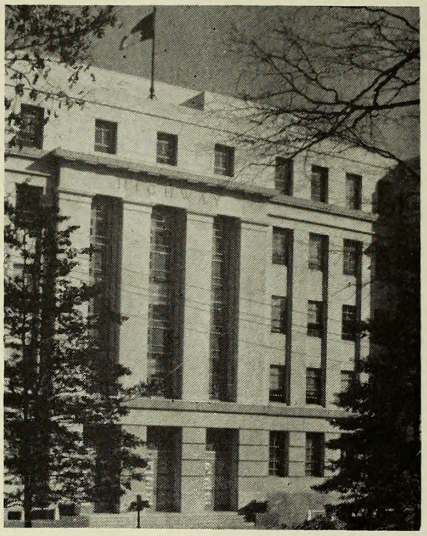
True, you would never see a real picture like this. It's symbolic of the people "behind" a highway for people.

Behind the blueprint are the rodmen and the chainmen and instrumentmen, the designers and draftsmen and computors, the right of way agents and the geologists.

Behind the helmet are the construction workers and inspectors. And behind the wheels of the cars and trucks are the people who use the finished highway.

Photographer Harold Powell portrays the immeasureable study and work required for over 7,000 employees of the North Carolina State Highway Commission.

ROADWAYS MAGAZINE



A Publication For Employees Of

The North Carolina Highway Commission

MARCH—APRIL

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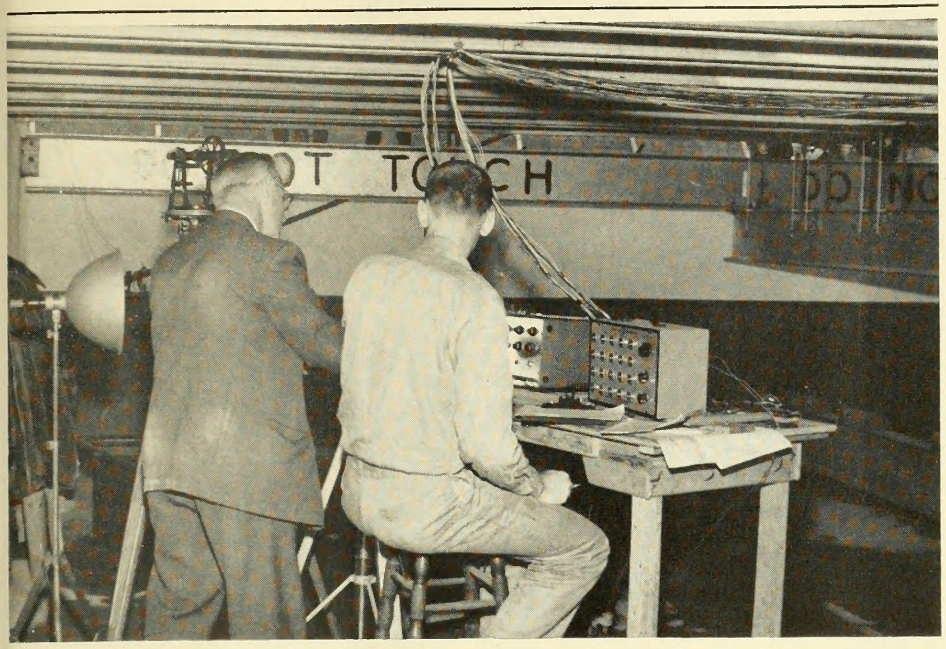
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Ben Roney.....Director of Secondary Roads

NATIONAL HIGHWAY WEEK – MAY 20-26



Research continues on the improvement and innovations on highway construction in North Carolina. Lab experiments such as the one above check on the strength, pressure and indurance of concrete, steel and other materials used in highway construction.

Research Program Gets Additional $75,000 For Highway Studies

Now in its fourth year, the Highway Research Program was given an additional $75,000 annually by the Highway Commission at a monthly meeting recently held in Charlotte.

This program receives $100,000 a year, partially from Highway Funds, although approximately 75 per cest of the total amount comes from the U. S. Bureau of Public Riads.

Headed by Professor Charles R. McCullough, research extends into far-reaching fields of highway planning and construction. Some of the projects presently under study are: vegatation along roadsides; uses of prestressed concrete beams on secondary road bridges; pavement designs; and examination of soils in the State to provide better road bases.

Since the program began 6 years ago with four projects, it has expanded so that it now includes 13. The recent increase in funds inables enlargement of the research program to include 10 new projects —and an 11th by request of two commissioners.

The program is controlled by a steering committee, W. F. Babcock, Director of Highways, Chairman. Others on the 11-man committee are C. W. Lee, Chief Engineer, J. S. Burch, Planning Engineer, Gene Thompson, engineer; and James Lacy and Dave Merchant, officials of the U. S. Bureau of Public Roads. Besides 5 college representatives on the committee, about 15 students are putting about 20 hours a week on the research projects presently underway.

The value of the program is evidenced in that already, studies have saved the commission money and the best use of road-building materials is practiced.

The country's second annual Highway Week will be observed May 20-26 this year.

Sponsored by the Better Highways Information Foundation in Washington, National Highway Week observances will make a concentrated effort to stress the Foundation's theme — "Better Highways Now—Save Lives, Time and Money."

During the week highway departments throughout the United States will hold special programs and events. North Carolina's main emphasis is aimed at the official dedication of the Lindsay C. Warren Bridge spanning the Alligator River. (See related story on inside front cover.)

The first National Highway Week was held during May 21-27, 1961. Congressional resolutions to designate the week and calling on the President to issue a proclamation for its observance, were introduced by Rep. George Fallon of Maryland and Senator Dennis Chavez of New Mexico. With the help of the Commerce Department and the U. S. Bureau of Public Roads, a Presidential Proclamation was issued quickly followed by a supporting statement from Commerce Secretary Luther Hodges, Federal Highway Administrator Rex Whitton, and governors across the country.

Endorsed by Labor, Industry, Auto Associations, National Safety Councils and others, the national observance was considered a worthy project intended to save lives and promote better highways.

National Highway Week reminds us that the American economy, defense and the betterment of our way of life grow increasingly dependent on adequate roads. Transportation has proven to be a salient factor in the fast and effective conversion of a vast wilderness into a world power with a peerless standard of living.

Hiwassee River Bridge To Honor Sen. Frank Forsyth

Presently under construction, the new bridge over the Hiwassee River will be named after State Senator William Frank Forsyth of the Thirty-third District.

A resolution was passed by the Cherokee County Board of Commissioners in which they requested that the new bridge be named after Forsyth whose work on behalf of the project was extensive.

Forsyth was born in Andrews, N. C. in 1915, and attended public schools there. He attended Emory and Henry College; The Executive Program, University of North Carolina; 4 sessions of the North Carolina Bankers Conference; School of Banking, in the Graduate School, Rutgers University. He has long been active in community activities, being Past President Murphy Lions Club; former Chairman Cherokee County Democratic Executive Committee; Chairman Cherokee County Better School Committee, and several other organizations.

He is married to the former Ruth Lail and they have two children, William Frank and Robert Ashley, and they presently live in Murphy, N. C.

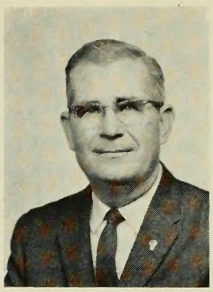
The new bridge will have a length of 240 feet, a 52 foot wide roadway, plus 2 sidewalks. Bids were opened on the project in July, 1961 and work was begun in October by Blue Ridge Construction Company at a low bid of $182,000.

COMMITTEE MEMBER

Former Safety Engineer Tarvia Jones was recently selected to serve on the Committee on Uniform Laws, Interstate Compacts and Safety, at the 9th Highway Transportation Congress to be held in Washington's Hotel Mayflower, May 8, 9, 10.



Gunter



Brinkley

Highway Engineers Named To New Positions In Raleigh

Layton Gunter, well-known to employees throughout the 14 divisions as President of the State Highway and Prison Employees Association, was recently named State Equipment Engineer.

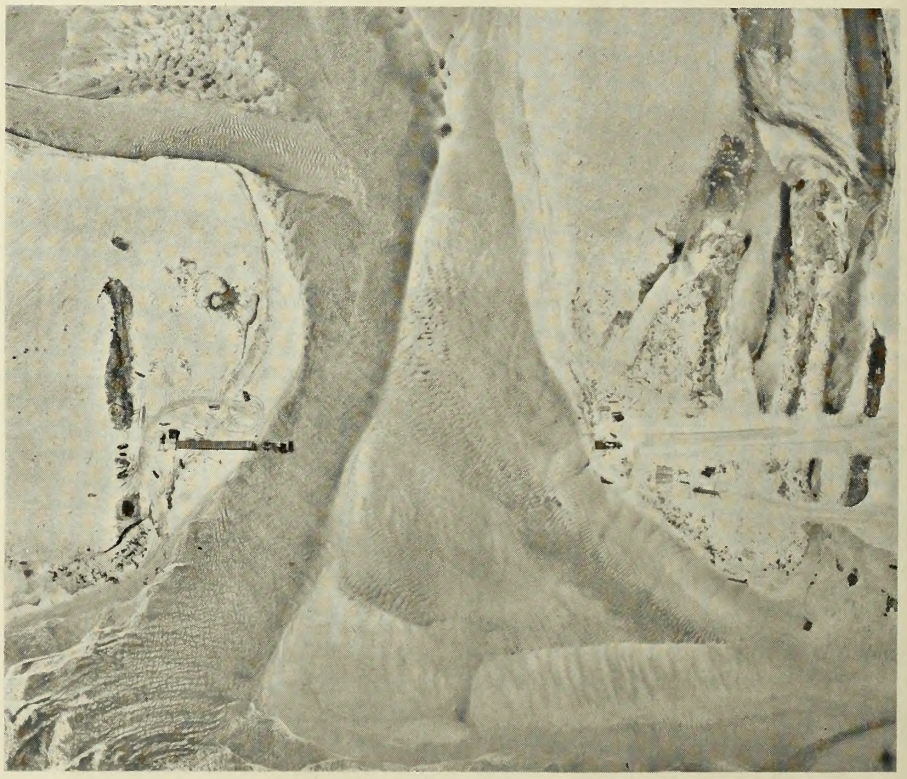
Gunter, who came to Raleigh from Graham, N. C., was former State Maintenance Engineer. He has a long and varied background of service with the Commission. In 1926 he joined the Commission as a clerk in the Greensboro office. He later served as rodman, inspector, instrumentman, party chief in the Bridge Department and Road Maintenance Supervisor. While living in Graham, N. C., he was District Engineer for the counties of Alamance, Caswell and Orange. He came to Raleigh first with the Highway Commission's Hydrographic Department in the early 30s. In 1959 he returned to Raleigh as Assistant State Maintenance Engineer.

George A. Brinkley, a native of Wilson, is the new State Maintenance Engineer. He joined the Commission in 1924 as a stock clerk and mechanic, and was named State Equipment Superintendent in 1950. He was held various jobs with the Commission, as Shop Foreman and Division Mechanic. In 1959 he became State Equipment Engineer.

A graduate of Atlantic Christian College, Brinkley is a veteran of World War II, and is a former Fire Chief of the City of Fayetteville.

Brinkley is married to the former Ira B. West and they have four children.

Aerial View of New Inlet Just After March 7.



Terrain Data Translator

New Machine Speeds Up "earthwork data" Process In Photogrammetry.

By Edgar Page

Photogrammetric Engineer



For some time, the preparation of "earthwork data" in the form of profiles and cross-section, has been a time-consuming and in certain cases, dangerous, process.

Anyone having experience in developing route studies will recognize the importance and usefulness of the Terrain Data Translator, recently acquired by the Highway Photogrammetry Section.

Many man-hours have been used in recording cross-section notes by hand and further adapted for computing earthwork quantities by preparing IBM cards. The new Terrain Data Translator, better known as the TDT, eliminates the majority of human error in making horizontal and vertical readings. You might say that with the new TDT, earthwork quantities can now be developed without hands ever coming in contact with them, and as in the case of the location of I-40, eliminates the danger of a field surveyor suspended by a rope, hanging over a cliff of the Pegion River.

A recent run of earthwork quantities, 1600 feet along the proposed centerline for the relocation of a portion of NC 226 between Spruce Pine and Bakersville, consumed 1½ man hours for the cross section and a total of 2 hours from the cross-section and a total of 2 hours from the cross-sections were started and the receipt of calculated quantities giving cut, fill and slope stake data. The TDT worked quickly.

However, in the case of locating a new highway, field support is essential in supplying a starting point. Once this "starting point" is established, distances, angles, and elevations are no longer a problem The aerial photograph becomes a "notebook" and the Kelsh Instrument a transit, level and tape. The manuscript becomes the base for the plan sheet and distances and elevations recorded by the TDT furnish the profile and cross-sections. Utilities and properties are noted on the photograph and transferred to the plan sheets by the Kelsh instrument. Area within the right-of-way is determined by reading X and Y co-ordinates at each angle point, with a precision co-ordinatorgraph and acerage is computed with the IBM 650.

All this is accomplished without facing a farmers shot gun or setting foot on private property as the Commission can now develop the majority of field data from existing roads. Needless to say, there is no devised method of driving center-line, slope and right-of-way stakes. We are still dependent on the surveyor to stake the final plan and the construction crews to build it.



When disaster comes, it strikes quickly and without warning. So much is done and so little credit is given . . . we chose Ephey Priest because he seems to typlify the "regular guys just trying to do a job." He would have preferred, as he says, "somebody more deserving" for the subject of this article.

By Lawrence Maddrey

THE COASTLINE TIMES, Manteo, N. C.

A jangling telephone call jarred Ephey Priest from his slumber early Wednesday morning . . . The call was from William Henry Jones, a fellow employee and foreman for the Highway Commission, whose excited voice blarred from the receiver. "Ephey . . . you better get over here quick, there's water all over the beach; your motor grader is under water." . . .

"We went to get the motor grader near the Holiday Inn, but couldn't get her out; I guess it was under four feet of water," Ephey says. "When I got on the beach there was water everywhere and all kinds of things floating around . . . you never saw so much stuff."

. . . Ephey had plenty to do that morning. "Before long Mr. Walker or somebody assigned me to another machine and I started cleaning up the trash on the highway . . . you know, chairs, splintered lumber and stuff; we didn't know how bad it was then."

"While I was working there somebody came over and told me about the John McKimmey family trying to get out of their home so Sambo Tillett and I drove her over to their cottage." Ephey says that he wasn't worried about anything except holes which could have toppled the tall machine over into the fast-moving ocean tide. "The diesel was all we had then, a duck would have been better or even a helicopter, but the grader is pretty good you can lift her wheels out by raising the scrapper blade, you know." Ephey took the route to the McKimmey home around by Sam and Omie's where he could rely on the highway. "When we got to the house water was pouring into the windows", Ephey says. "We helped John, his wife and their daughter into the grader after they waded out to meet us. They didn't try to take anything out, I guess they were glad to get out themselves. There was a lady with them . . . "It was pretty crowded in the cab on the return trip and I worried a lot more about holes."

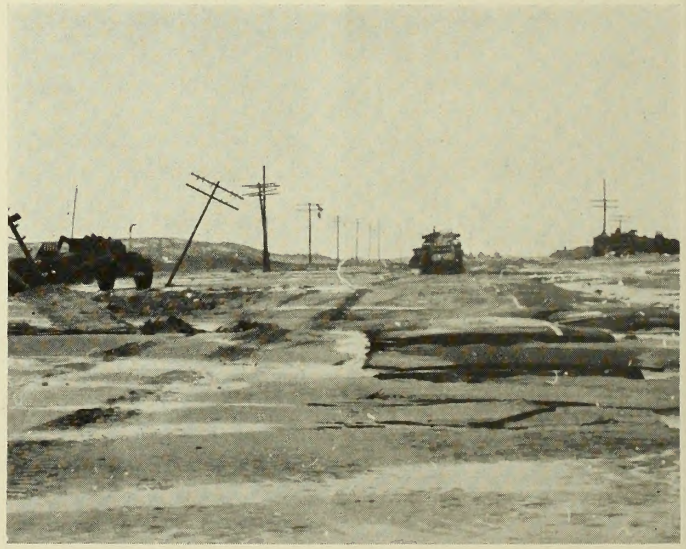
"No, I wasn't scared; nobody was scared, they just seemed worried about property damage."

". . . there was debris floating all around us . . . lamps . . . mattresses . . . pillows . . . cushions . . . chairs . . . I even remember seeing a kitchin stove in the road . . . we had to shove it out of the way. I guess we saw more gas tanks than anything else; we must have seen 25 of them at least."

Ephey didn't run across any injured people all morning but the people who rode with him might have been reassured had they known that he is qualified as a first aid instructor by the Red Cross; the scraper operator doesn't talk much about this. "You've got to remember that there were boys working on dump trucks and highway wreckers doing the same thing I was; we were all just doing a job, I don't deserve any credit," Ephey says.

Whether he deserved credit or not, Priest, and others like him were the only means of rescue from Nags Head until 4 o'clock on Wednesday afternoon when a helicopter arrived from Elizabeth City's Coast Guard Station. The Manteo operator and his machine trudged the shores like a brown phantom all Wednesday afternoon. . .

PRIEST AND OTHER HIGHWAY MEN WERE GREETED BY SCENES LIKE THE ONE BELOW:



Storm Whiplashes Coastal Area On March 7 ——

To most residents of the Outer Banks, the storm seem to spring from some hidden place, creeping in with ferocious velocity more destructive than the hurricanes which have yet to batter the Carolina coast.

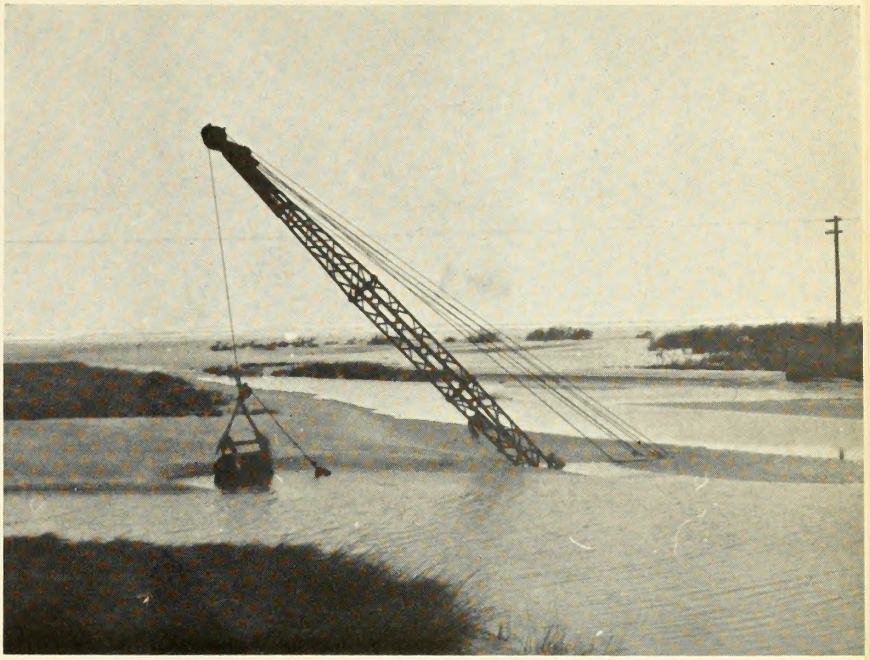
Highway crews went to work immediately, rescuing residents, trying to make just a few roads passable for safe quick exits from the rising waters.

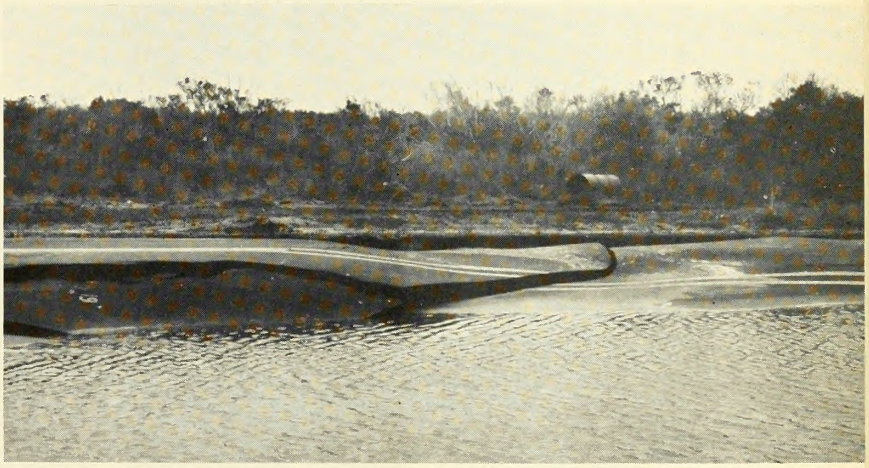
After the storm subsided, the task at hand was, and still is, enormous. Little known to the general public, highway crews from six divisions were called and brought equipment. Many stayed for two weeks, leaving family and home, until the majority of the immediate clean-up and repairs could be completed.

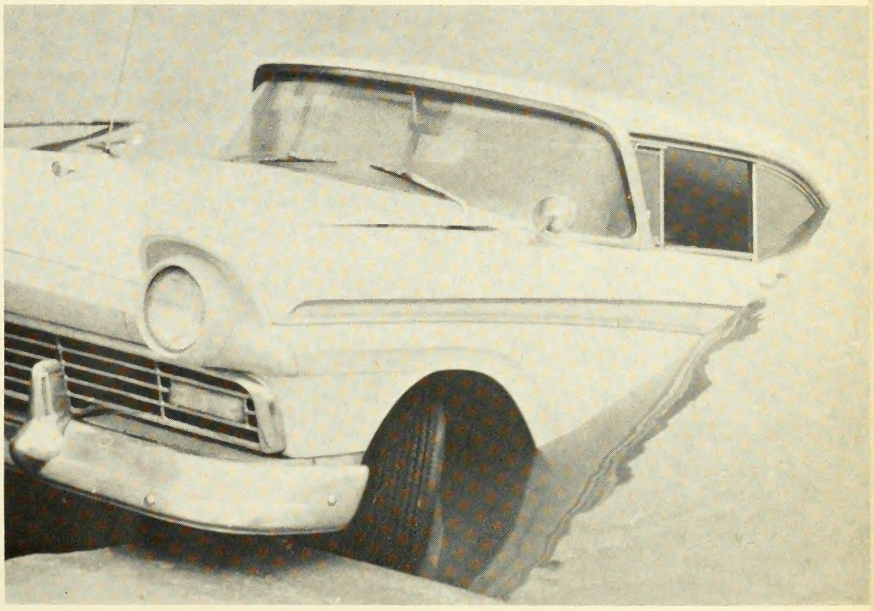
A quick survey showed a "new inlet" had been created, destroying a portion of NC 158. Ferry slips were damaged, roads sunken and twisted from water and sand, and in many sections, highways were completely covered with sand.

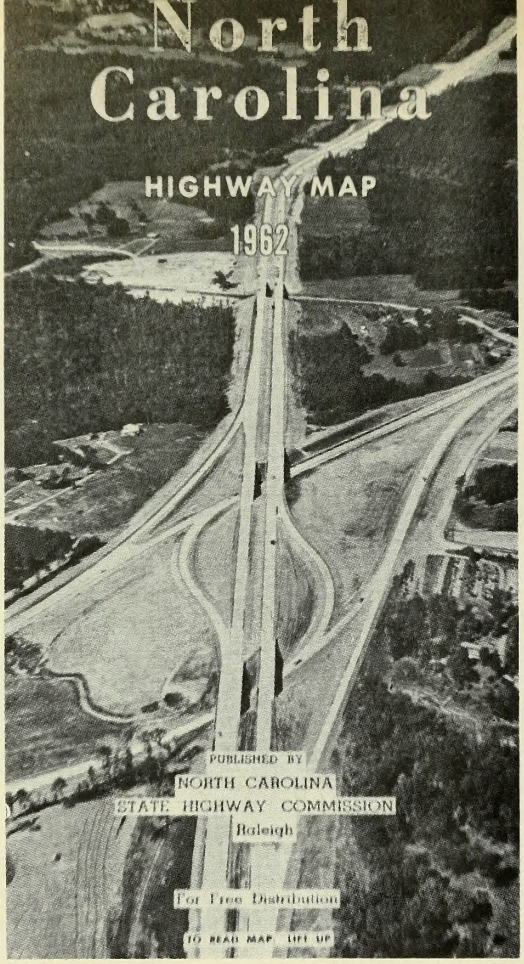
Headed by Governor Sanford, first-hand reports were submitted, surveys conducted to check on the total extent of damage, and the Department of Commerce in Washington declared the section from Duck south to Hatteras as a national emergency area. Damage is estimated a $500,00.

Although the unified efforts of six divisions were needed to begin picking up the broken pieces, special congratulations are at hand for Division One Engineer W. N. Spruill and District Engineer George Mack. Today, the Commission employees face a big job—"rehabilitating" roads almost washed away . . . and all this before the tourist season opens! Hats off to the hard work, sleepless hours, and fine cooperation of Highway employees who are "regular guys just trying to do a job" ! ! !









Black and white 1962 highway maps are now available for distribution by the Location Department. Lloyd Cook, Chief Location Engineer, and his staff have brought the map up to modern standards. Symbols used conform to a nation-wide effort to acheive a uniformity that will make map reading and the use of all state highway maps easier and simpler for the traveler. This year's 1962 black and white map carries on its cover an aerial photograph of the interchange between US 70 and I-85 at Eno Station about 5 miles west of Durham.

HIGHWAY MAP OF JUNE 1924

An old copy of a 1924 highway map yielded these amusing old-time rules and regulations, and pointed out how up-to-date and informative the new maps are.

The speed limit on State highways was listed as 30 miles per hour. However, registration rates were a little rugged: for automobiles of 24 horse power or less, it was $12.50 a year. Automobiles of 35 horse power or more required a registration fee of $40 a year. Owning a truck was murder. The registration rates ranged from $12.50 for trucks with a carrying capacity of less than 1000 pounds, to $300 for trucks with carrying capacity of 4 tons or more.

There was also a little note which read, "Motor vehicles used for the transportation of passengers for hire shall pay fifty percent more than the above rates."

But the slogan for North Carolina's Highway Commission was great . . . **"It's harder to get LOST in North Carolina than to find your way in many States."**

"CRAZY" LETTERS

Besides the job of building bridges, highways and roads, the Highway Commission receives a wealth of mail requesting information on almost anything; here are just a few samples the Public Relations Department is faced with answering:

Dear Sir:

Please send me all free information you have on North Carolina. I am especially send for a new North Highways Map with colorful illustrations. The 8th grade in studying North Carolina History. And we are required to have a scalp of NC.

Your friend,
Delores

(Seems even the 8th graders are after us . . .)

N. C. STATE HIGHWAY COMMISSION

RALEIGH, N. C.

Dear Sir:

Please send me a map of South Carolina.

(This man didn't know north from south.)

Dear Sir:

I wrote last week regarding ferry service to the Outer Banks . . . Could you tell me if we will be able to use the temporary bridge (at "New Inlet") by May 6? . . . We are so anxious to come then, as my husband has all his fishing gear ready and vacation spoken for. We were there last April, but it was cold and no bluefish . . . Please answer soon, so my husband can get his blood pressure down!

(Lady, we will do our best . . .)

Dear Sir:

You sent me a map of your State but didn't send me a ferry schedule. And the ferry schedule that you sent me only included the eastern part of the State. What do people do in the western part of the State?

(We refrain from commenting on this one . . .)

Dear Sir:

Please send me all the free information you have and the Highway Building.

(Sonny, that's a large order!)

N. C. S. H. P. E. A. Association News

VOLUME III-NUMBER 2 MARCH, 1962

INSURANCE CONVERSION COSTS—many who are retiring this year have requested prices on the costs of converting a portion of the Group Life Insurance carried under the SHC Group Insurance Program. The policy allows conversion of any portion, in multiples of $500 and up to the maximum carried at time of retirement, upon application to the Company within 30 days after retirement date, without medical examination. Ordinary Life is the type converted to, and the employee can still continue $1,000 with the regular group if desired and provided he has had continuous coverage as much as 5 years, the present premium rate for this $1,000 being $3 per month. Conversion costs below:

AGE NEAREST BIRTHDATE	ANNUAL	SEMI-ANNUAL*	QUARTERLY*	MONTHLY*
60	$54.63	$27.86	$14.20	$4.78
61	57.25	29.20	14.89	5.01
62	59.99	30.59	15.60	5.25
63	62.95	32.10	16.37	5.51
64	66.21	33.77	17.21	5.79
65	69.87	35.63	18.17	6.11
66	73.92	37.70	19.22	6.47
67	78.31	39.94	20.36	6.85
68	83.04	42.35	21.59	7.27
69	88.10	44.93	22.91	7.71
70	93.49	47.68	24.31	8.18

All premiums are per $1,000; prices for ages below 60 are proportionately lower.* If premiums are to be paid semi-annually, quarterly, or monthly premiums must be at least $20. If amount desired is less than a $20 premium by the month or the quarter, premium can be paid on semi-annual or annual basis so the amount paid in any one payment is at least $20 or more.

Connecticut Life Insurance Company has an office at 911 Daniels Street in Raleigh and 909 Wachovia Bank Building in Charlotte for your convenience, and applications for conversion should be addressed to one of these two offices.

RETIREMENT FUNDS—per report as of December 1961:

Assets: Cash	$ 287.722	
Investments	303,409,034	$303,696,756
Approximate Distributions of Assets:		
Employees' Contributions	$114,281,089	
Employers' Contributions	189,415,667	$303,696,756
Payments Made Calendar Year 1961:		
Benefits to retired members	$ 5,560,286	
Payments to Beneficiaries, Option 1	128,658	
Refunds to Members Withdrawing	2,839,507	
Social Security Taxes	20,103,367	$ 28,631.818

RETIREMENT INVESTMENT—per report of December 31, 1961

CLASS OF SECURITY	AVERAGE YIELD	BOOK VALUE	% TO TOTAL
County Bonds	3.21	$ 14,352,247	4.73
Municipal Bonds	3.17	15,104,293	4.98
U. S. Treasury Bonds	3.29	137,627,678	45.36
Corporate Bonds	4.53	112,656,867	37.13
U. S. Agency Bonds	4.51	21,038,115	6.94
Public Housing Authority Bonds	3.46	1,246,716	.41
Farmers' Home Administration Notes	4.00	1,012,769	.33
Total Bonds & Notes	3.83	$303,038,685	99.88
Common Stocks		370,349	.12
Grand Total		$303,409,034	100.00

(Continued on page 17)

The Long Road From Durham to Greensboro

By James S. Burch, Planning Engineer
North Carolina State Highway Commission

For the past few years, many adverse comments have been heard about the traffic situation on Interstate Route 85 between Efland and Greensboro. Like most criticism, the reaction is based largely on the lack of understanding of the situations involved.

In effect, we are now in the final scene of a drama on which the first curtain was raised some 15 years ago. The drama has included many colorful elements including public service, traffic on the State's Main Street, leading figures, accidents, expressway standards, high speeds, right of way, inconvenience, traffic relief, and other aspects which have been sufficiently newsworthy to have caused a great deal of comment. Literally thousands of actors have played their roles, including tourists, truck drivers, surveyors and congressmen, state officials, newspapermen, patrolmen, engineers, contractors, bridge builders and perhaps half the people in the State. Millions of dollars have been invested, and hundreds of vehicle-miles of travel have been served over a long period of time.

Perhaps the most important characters in the drama have not been the players themselves, but rather the basic forces and situations which directed the course of the drama. Many of these situations could not have been anticipated, controlled, nor treated in any better manner. The major elements have been of a nature unseen and often not understood by the traveling public. Roughly these elements could be named as geography, finance, and purpose. The theme of the drama throughout has been to provide the best possible service to an ever increasing traffic volume, despite great and perplexing problems.

The Act I curtain was raised about 1947, this being prior to the time when Governor Kerr Scott was elected to that office. At that time, the die was cast, the play was written and the general schedule for 10-15 years predestined—although many subplots occurred during the intervening acts. To understand the closing scene, we must go back to the first curtain.

Back in 1947, Route US 70—the traditional Main Street of North Carolina—ran through a series of towns—Hillsboro, Efland, Mebane, Haw River, Graham, Burlington and Whitsett. The highway, mainly of the two-lane type, had been originally developed over 20 years before, being located on the north side of the Southern Railroad. It was rolling in nature with limited sight distance, had some narrow bridges and sharp curves, and—most important— it forced its way through all these towns, most of which have been forgotten by the present generation of travellers. Traffic was growing at phenomenal rates; congestion and delay were prevalent. A long cue of traffic following a big truck was the normal experience. The situation demanded an immediate decision as to a long range plan for major improvement.

No federal aid funds had been earmarked for the Interstate highway system, which was to traverse this area. Any funds used for improvement required 40% to 50% from inadequate State Highway funds. Along the existing highway were hundreds of side roads, railroad spurs, driveways, and small businesses. The basic decisions which had to be made in Act I, Scene I, were these:

Plan A. Should the then existing old US 70 be double-tracked and converted into a four-lane expressway, using the relatively meagre funds then available? To do this would require the complete rebuilding and major relocation of long segments, to eliminate steep hills, obtain sight distance, modify sharp curves. Little of the existing highway could be used. It would require closing up scores of crossroads, and substituting expensive overpasses or underpasses. Hundreds of driveways would have to be closed, with roadside business suffering the result. The many towns would have to be traversed, bypassed, or provided with most expensive viaducts. There were most serious complications with the nearby railroad and its spur tracks and side tracks, as well as several river crossings, and the nearby hilly terrain. To do this would seriously if not mortally damage the economy of the small towns, and involve exorbitant State Highway costs from funds not available and not in sight. Scores of expensive and objectionable detours would have to be created, built and used. Finally, how could the already traffic be accommodated while the existing highway was being remodeled, relocated, double-tracked, and converted on such a grandiose scale? Such was the problem offered by Plan A in 1947.

Plan B. As an alternate, could a new highway be built through virgin territory along the south side of the railroad all the way from the vicinity of Efland to Greensboro? Some 35 miles were involved with all the necessary problems of right of way, drainage, clearing, grubbing, grading, structures and paving. Again the funds were not in sight to do all of this within a few years. The best that funds would permit was the building of two-lane rather than four-lane segments, with only partial control of access, and staged **over a period of many years.** If this were done, it was expected that eventually funds might become available to convert the two-lane section to a four-lane section, if traffic continued to grow. It is emphasized again that no federal aid funds were then earmarked for use on the Interstate

system. Yet it was required that such construction be made to **then existing** Interstate standards, involving relatively high cost.

Because of the basic geography, these two plans were the only ones which could be considered. Much thought was given to the problem, it being known then that whichever decision was made would affect the course of highway history for some 15 years.

Even as it is usually more desirable and cheaper to build a new house, rather than to double the size of the old house while living in it; the decision was made to follow Plan B. The die was cast and the plot written. The final curtain is expected to fall in 1962.

Following this plan, a two-lane highway with partial access control was build in segments over a period of some eight or nine years. Space provision was made for an ultimate four-lane expressway. As these two-lane segments were completed, they were opened to traffic, relieving old Route 70 and the several small towns of their traffic burden; separating the through from the local traffic; and permitting the through traffic to move without congestion or delay. These benefits to traffic are now an historical fact, having been delivered to the traveling public on both routes for many years. Since the first segment was opened until today, traffic has never been blocked, has never been forced back onto the old highway, and has never been seriously delayed.

By 1955 the two-lane partially controlled new highway had been built to the **then existing** Interstate standards, and was serving the traveling public according to the original intent. Millions of dollars had been spent, but millions of dollars had been and would be saved by the traveling public. Public reaction was highly favorable because of the progress that had been made.

Then in 1956, a very important change came about which was to alter the plot and to inject into it certain very serious elements of complexity and adverse criticism. In that year the Congress established the Interstate system in the nation and, for the first time, earmarked special federal aid funds for it, so that the state's future share in the construction cost would be only 10%. Unfortunately, however, and most seriously in this case, the Interstate standards **were changed** to the extent that the newly built two-lane highway no longer met the required standards. Here was a problem of the first magnitude. The traffic had been transferred from the old route to the new. The public had been given the benefits of a new congestion-free, delay-free, and toll-free route. It was impossible to rebuild the brand-new two-lane highway while it was serving traffic. It was unthinkable to force the traffic back onto the old route US 70 through these many small towns. Yet the construction had to be done to meet the standards. Meanwhile traffic volumes mounted.

The only decision possible was the one taken, i.e., as Interstate funds became available, to build the additional two lanes to the new standards alongside the old lanes, to revise many of the existing structures, to close up many crossroads, to build additional overpasses—all of which had to be done without interfering with the steady day-and-night flow of traffic on the original two lanes. Many of the interchange ramps had to be redesigned, additional rights of way acquired and construction completed in segments.

Traffic was switched by segments from one side of the highway to the other as fast as funds, construction, weather and safety would permit. This switching has been under way for several years.

Here there arose a problem of safety which can only be explained in terms of driver psychology. It is a well-known fact that driving is a monotonous exercise; that the conscious mind cannot long remain alert to a monotonous situation; and that all of us drive with our subconscious minds, through automatic reactions. When we proceed on a two-lane pavement, with two other paved lanes in evidence on our left, we subconsciously presume that the pavement we are using permits two-lane movement in our direction, the other two lanes on our left being available for traffic movement in the on-coming direction. We are therefore subconsciously inclined to overtake any slower vehicle ahead of us, presuming subconsciously that we will not meet any on-coming traffic. This false subconscious presumption has lead to thousands of near accidents, and to scores of real accidents, including several fatalities.

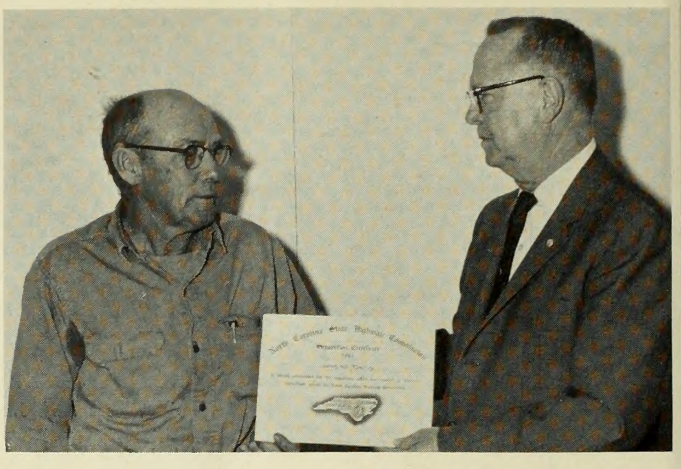
The problem has been "how can we keep the driver's conscious mind alert to the danger of the on-coming vehicle?" To do this, the Highway Commission has utilized literally thousands of special signs, markers, warning lights, barricades, straw piles—every means known, to continually hammer the driver with the message—"Two Way Traffic—Do Not Pass". It is known that repeated warnings dull the conscious reception, however, the situation was so serious that repeated warnings were necessary and were demanded, to attempt to force his conscious mind to be alert. Who can judge whether there were too many or too few signs? Who has the facts or wisdom to judge the shortcomings of many drivers who set up situations resulting in accidents to themselves or to others? In fact, it would be difficult to find anyone with the wisdom to judge the rightness or wrongness of the thousands of decisions which had to be made by those who were responsible for directing and warning and guiding traffic away from the existing hazards, day and night, throughout the years.

Going back to the plot of the play, we may recall that the original two lanes had been built to the old, and not to the new standards. Thus after the final new lanes had been built, it became necessary to transfer the traffic by segments from the old to the new lanes, in order that the old lanes might be brought up to final standards. This involved many

(Continued on page 16)



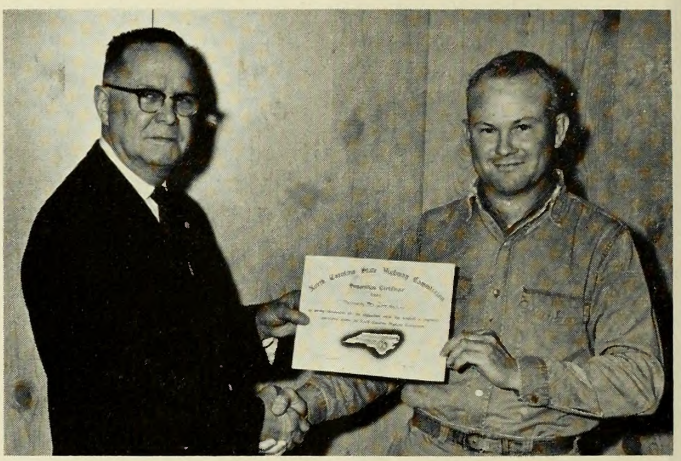
February 7, Equipment Depot, Raleigh. BYRON J. ABBOT. Suggestion: Installation of air pump at Depot filling station.



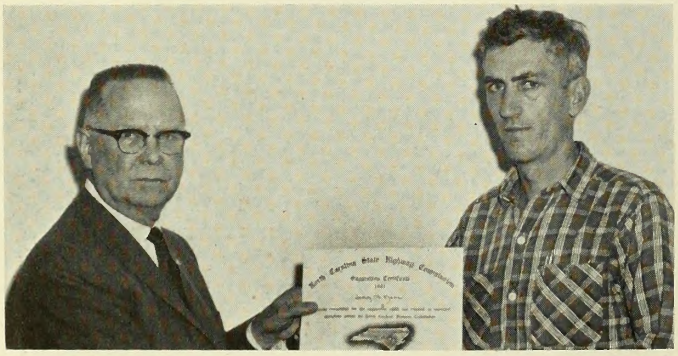
February 8, Shelby. J. W. BEAN. Suggestion: Improvement of road working signs.



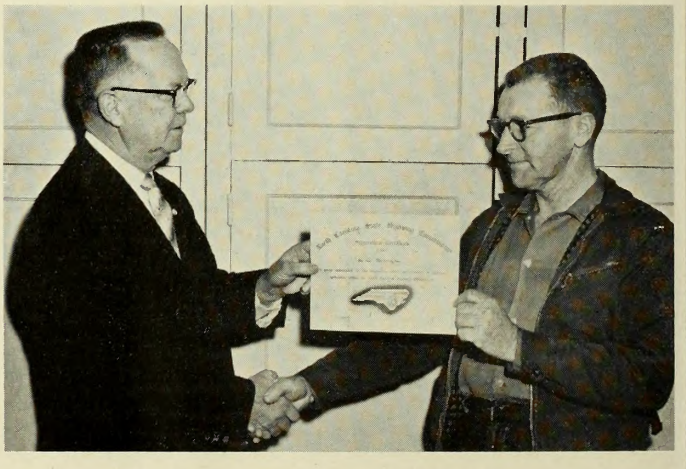
February 9, Kenansville. HERBERT BROCK. Suggestion: Painting of equipment number on tail gates to correspond to equipment number of truck.



February 12, Goldsboro. AARON WADDELL. Suggestion: Installation of back up light on motor graders and improved breaking facilities on motor graders.



February 16, Winston-Salem. J. A. NEAL. Snggestion: Install device to prevent damage to equipment using snow plow attachments.



February 19, Bunn. S. W. SYKES. Suggestion: Method to prevent stop lights burning out from water seepage, and instructing school bus drivers not to unload children in vicinity of prisoners working.

Suggestions Yield State $$$ And Time

The old adage "two heads are better than one" has more than proven true for the Highway Commission. About 18 months ago a program was begun whereby employees submitted suggestions to improve the jobs and services performed by the Commission.

This year over 125 suggestions were submitted, dealing with practically every phase of work, from equipment maintenance to safety. Pictures of the 11 winners are shown on these two pages.



During the month of February, presentation ceremonies were held throughout the State to recognize the employees who made the winning suggestions. Winners were presented a certificate noting their achievements plus a lapel pin or tie bar.

Both Otis Banks and Layton Gunter, Executive Secretary and President of SHPEA respectively, attended every award presentation and participated in the programs. Safety Officer Herb Hardy, Division and District Engineers, and employees of the respective counties were on hand. Withers Davis, Personnel Officer, made the presentations and recently stated that the program, initiated by the Personnel Department, had proven to be a boon to the Commission.



The Commission is taking advantage of the ideas employees generate through this new system. During the past 6 months of full-scale operation, the Commission has saved big money and gained some time-saving ideas throughout the State.

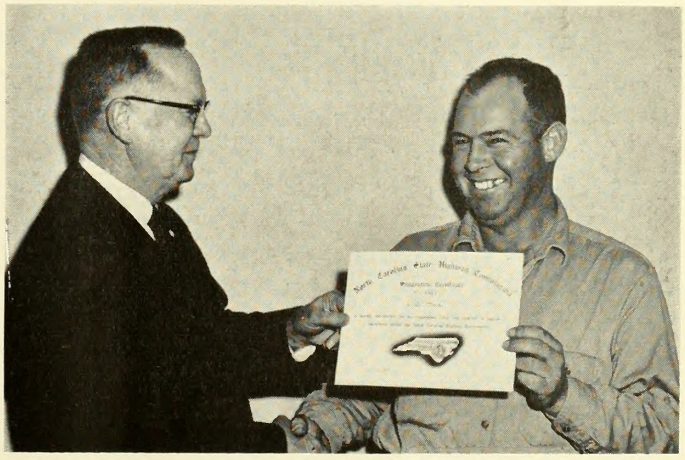
(Continued on page 17)



February 20, Method. A. H. SESSOMS. Suggestion: Improvement of traffic signs.



February 23, Burgaw. WALDO HEWETT. Suggestion: More clearance signs at a greater distance away from Holden's Beach Bridge—to facilitate tng traffic approaching bridge.



February 21, Fayetteville. J. W. AKE. Suggestion: Installation of mirrors on motor graders frames.

109 PROJECTS RECEIVE APPROVAL FOR 1962-1965

PROPOSED HIGHWAY CONSTRUCTION PROJECTS—1962-1965

US 64—Widening and general improvement from Columbia to Alligator River Bridge including new bridge at Alligator Creek. 15 miles.

US 64—Widening and general improvement from Alligator River Bridge to junction with 264 near Manns Harbor. 12 miles.

US 158—Widening and general improvement from intersection with NC 34 southerly to Grandy. 11 miles.

NC 125—Widening roadway and structure and general improvement from Hamilton to Hobgood. 13 miles.

NC 11—Widening and general improvement from junction of NC 125 in Oak City southerly to Edgecombe County Line. 9.6 miles.

US 264—New bridge in Engelhard.

US 17—Construction of a bypass around Hertford.

Engineering studies and surveys for new highway from north of Elizabeth City to the Virginia Line neary Moyock. 16 miles.

Engineering studies and surveys for new road on Outer Banks from Duck northerly to vicinity of Knotts Island. 25 miles.

General improvements and widening from junction of US 70 and NC 24 west of Morehead bypassing Newport to vicinity of the Craven County line. 12 miles.

US 264—Widening and general improvement from east end of Farmville Bypass to west end of Greenville Bypass. 7 miles.

US 264—Widen 10-mile section remaining portion of US 264 between Bunyan and Pantego to high type two-lane pavement. 10 miles.

NC 58—Widening roadway and bridges and general improvement from junction with US 13 near Snow Hill northerly to Stantonsburg. 14 miles.

Construction of 17th Street in Wilmington from Shipyard Boulevard to Dawson Street. 2.5 miles.

US 701—Widening and general improvement from Clinton Bypass northerly to I-95 near Smithfield.

Reconstruction and widening of SR No. 1308 in Onslow County. 2.0 miles.

NC 561—Relocation for right-of-way acquisition from NC 305 to US 13. 5.0 miles.

US 421—Relocation of US 701 and US 421 from the southern end of Clinton Bypass to the southern junction of 421-701. 1 mile.

NC 11—Widening roadway and bridge from Tin City to junction with US 117. 1 mile.

US 421—Construction of bypass around Harrells Store. 1 mile.

US 701—Construction of bypass around Ingold. 1 mile.

Widening and general improvement of SR No. 1717 in Nash County.

Construction of cross-town route in Rocky Mount beginning at NC 97 east of US 301A following along SR 1248 to connect into Atlantic Avenue thence along Atlantic Avenue to Rose Street thence on new location to Arlington Street thence along Arlington Street to George Street.

NC 43—Widening and general improvement from Pinetops northerly. 9 miles.

US 64—The construction of a bypass around Tarboro.

US 64—Engineering studies and right of way acquisition for a bypass around Rocky Mount.

US 64—Widening and general improvement from east end of Rocky Mount Bypass to west end of Tarboro Bypass. 12 miles.

US 70—Widening to four lanes with possible minor relocation from east of Garner to junction with NC 210 west of Smithfield.

US 64—The construction of a new facility from west of Wendell bypassing Zebulon to a junction with US 264 east of Zebulon.

US 64—Widening to a four-lane facility with possible minor relocation from a junction with the Zebulon Bypass easterly bypassing Spring Hope and Momeyer to a junction with the west end of the Nashville Bypass.

NC 98—Widening and general improvement and possible minor relocation between Wake Forest and Durham County line.

Acquisition of rights of way for the southern section of the Raleigh Belt Line from Western Boulevard easterly to junction with US 64 near Memorial Hospital.

Raleigh—Widening of Wake Forest Road to four-lane Urban section from Norfolk Southern Underpass to the Raleigh Belt Line. 2 miles.

Raleigh—Widening to four-lane Urban section of Six Forks Road from Wake Forest Road to North Hills.

US 401—Widening to a four-lane divided highway from south of Raleigh to junction with NC 55 east of Fuquay-Varina. 11 miles.

NC 87—Widening and general improvement from Hammonds Creek southerly to a junction with US 74 bypassing Acme.

US 401—Fayetteville—Widening of Raeford Road from Robeson Street westerly to vicinity of NC 59. 3.5 miles.

NC 87—Fayetteville—Widening and general improvement of Bragg Boulevard from its junction with Rowan Street northwesterly to Fort Bragg. 8 miles.

NC 301 Business—Fayetteville—Widening of Gillespie Street from Russell Street southerly to 301 Bypass. 2.5 miles.

Morganton Road—Fayetteville—Widening from Fort Bragg Road westerly to Cliffdale Road. 2 miles.

Fayetteville—First stage construction of a new facility from Fort Bragg area to a junction with US 401 at Owen Drive.

NC 24—General improvements on certain sections between Fayetteville and Clinton.

US 401—General improvements from Neal's Creek northerly to Wake County line.

US 401—General improvements from Lillington southerly 8 miles.

Fayetteville—First stage construction of inter loop from Raleigh Road to Fort Bragg Boulevard.

NC 24—Construction of new bridge across Cape Fear River in Fayetteville to a junction with US 301 at Grove Street.

NC 211—Construction of Bypass around Bladenboro.

NC 211—Widening and general improvement from Clarkton easterly to junction with US 74. 20 miles.

US 220—Greensboro—Right of way acquisition for construction of high-type facility from Walker Avenue southerly to an interchange with I-40 and junction with I-85.

Greensboro—Extension of Gaston Street to junction with Market Street.

Construction of inter loop from Fisher Avenue and Smith Street to Summit Avenue and thence southerly to Market Streets and thence southerly to Lee Street to junction with Asheboro Street.

US 70A—Construction of terminal for one-way streets between Market and Madison Street.

NC 14—High-type pavement—Reidsville-Leaksville area. 11 miles.

NC 54—High-type pavement—Carrboro to Chapel Hill Bypass. 3 miles.

US 70A—Relocation or improvement from Sedalia to Market Street area, Greensboro. 8.0 miles.

NC 22—Relocation Pleasant Garden area, Greensboro. 3.0 miles.

Guilford County—Extension Friendly Road to Oak Ridge Road and improvement to a junction with US 158.

New bridge and approaches across Dan River connecting NC 704 and SR 2154, Rockingham County.

Rockingham—SR 1442—Construction of new bridge across Ledbetter Lake.

NC 27—High-type pavement from Pee Dee River to NC 109. 8 miles.

US 421—High-type pavement—Deep River towards Goldston. 4 miles.

US 74—Provide four-lane facility and relocation from Pee Dee River to a junction with US 1. 7 miles.

US 220—Widen to four-lane facility from Ellerbe to Rockingham or relocation.

US 1—Construction of a bypass of Rockingham. 3 miles.

US 1—Widen to four lanes from southern end of Sanford Bypass to junction with US 15. 5 miles.

US 15-501—General widening and realignment from Sanford to Pittsboro. 14 miles.

US 421—Widening and improvement of Endor Street in Sanford. 4 miles.

US 421—Relocation from vicinity of Goldston to south of Siler City. 13 miles.

US 421—Relocation in Silver City pending availability of right of way.

Chatham County—SR 2308—Widening and improvement.

NC 49—Construction of new bridge over Rocky River in Randolph County.

US 74—Robeson County — General widening and improvement from 5.0 miles south of Lumberton southerly to Boardman. 7 miles.

Silas Creek Parkway, Winston-Salem, widening and high-type pavement, construction of grade separation at Robinhood Road and US 158. 4 miles.

Extension of Marshall Street in northern Winston-Salem to a junction with US 52. 4 miles.

US 52—Construction of high-type facility with control of access from junction with East-West Expressway in Winston-Salem to a junction with I-85 near Lexington. 20 miles.

US 21—Construction of high-type controlled access facility from NC 49 to a junction with North-West Expressway in Charlotte.

Construction of railroad grade separations at Trade Street and Morehead Street in Charlotte.

US 601—Widening and improvement from Concord to US 74. 30 miles.

NC 49—Widening and general improvement from Charlotte area to South Carolina line.

Construction of additional ramp at interchange on NC 49 and NC 73 in Cabarrus County.

Charlotte—Construction of Kenilworth Connector from Park Road to Baxter Street. 1.5 miles.

Widening and improvement of South Tryon Street in Charlotte from Clanton Road to West Boulevard.

US 70—Widening and general improvement from west of Salisbury to NC 801. 8.0 miles.

Relocation of Eastway Drive in Charlotte from Independence Boulevard to Providence Road.

US 601—Relocation to provide for high-type facility bypassing Dobson to Mt. Airy. 14 miles.

NC 163—General improvement from Othello towards West Jefferson. 3 miles.

NC 194—Relocation from Smoky Gap to US 19-E.

NC 105—Two-lane high-type pavement from Boone to Avery County line.—Two-lane high-type pavement—Boone Bypass—2 miles.

US 52—High-type surface—Virginia line towards Mt. Airy. 3 miles.

NC 90—Widen and relocation from junction with NC 18 in Caldwell County to NC 127 in Alexander County.

NC 18—Widening and general improvement from vicinity of Morganton to Gamewell in Caldwell County.

US 74—Construction of bypass of Kings Mountain.

NC 127—Relocation from First Avenue SE south to US 64-70-321, Hickory.

US 321—Widening and relocation from South Carolina line to south of Gastonia.

US 23—Construction of high-type facility from Weaverville to Ivy River. 10 miles.

NC 181—Widening and general improvement from North of Morganton to Steel Creek. 11 miles.

US 19E—Relocation from Burnsville to Madison County line. 9 miles.

NC 108—Relocation from Rutherfordton to junction with I-26 at Columbus.

US 19E—High-type pavement from Spruce Pine to Micaville. 7 miles.

NC 18—Morganton—Construction of Green-Sterling Street Connector in Morganton.

Morganton—Construction of Union Street—Meeting Street Connector.

US 64—High-type pavement from NC 280 into Brevard.

NC 284—Widening and general improvement from Dellwood to Cove Creek.

NS 129—High-type pavement from Topton to Robbinsville.

US 129—New Bridge at Topton.

US 129—General improvements and relocation from Robbinsville to Tennessee line.

Construction of SR 1326 in Transylvania County from SR 1321 westerly 2.0 miles to the proposed National Aeronautics Space and Administration facility.

Construction of a road between Grandview Road in Cherokee County to the Tennessee line (Wagon Train Road).

Washington County—SR 1126, pave from Roper easterly, approximately 10.0 miles.

NC 51—New bridge over McAlpine Creek in Mecklenburg County.

NC 742—New bridge over Rocky River, Stanly-Union Counties.

MAJOR SUB-STANDARD SECONDARY ROAD BRIDGES TO BE RECONSTRUCTED OR REPLACED

Northampton County—Meherrin River, SR 1330 between SR 1333 and Co. Line.

Tyrrell County—Scuppernong River, SR 1105 between SR 1115 and SR 1109.

Pamlico County—Dawson Creek—SR 1302 at Janeiro.

Edgecombe County—Tar River—SR 1243 between NC 97 and SR 1251.

Halifax County—Little Fishing Creek, SR 1343 between SR 1339 and SR 1340.

Halifax County—Little Fishing Creek, SR 1315 between SR 1316 and NC 4.

Halifax County—Fishing Creek, SR 1332 between NC 43 and Co. Line.

Johnston County—Swift Creek, SR 1562 between SR 1561 and SR 1010.

Nash County—Fishing Creek, SR 1513 between SR 1501 and Co. Line.

Durham County—Eno River, SR 1401 between SR 1400 and SR 1449.

Vance County—Sandy Creek, SR 1533 between SR 1535 and SR 1534.

Wake County—Neuse River, SR 1900 between SR 1901 and Co. Line.

Wake County—Neuse River, SR 2555 between SR 2511 and SR 2552.

Alamance County—Alamance Creek, SR 2116 between SR 2119 and SR 2158.

Alamance County—Stinking Creek, SR 2309 between SR 2317 and SR 2381.

Alamance County—Stinking Creek, SR 1136 between SR 2381 and NC 49.

Alamance County—Gr. Alamance Creek, SR 1149 between SR 1145 and SR 1150.

Guilford County—Reedy Fork Creek, SR 2774 between SR 2719 and SR 2770.

Guilford County—Haw River, SR 2711 between SR 2710 and Co. Line.

Rockingham County—Haw River, SR 2620 between SR 2619 and SR 2623.

Montgomery County——Little River, SR 1519 between SR 1555 and SR 1554.

Moore County—Deep River, SR 1621 between SR 1624 and SR 1625.

Randolph County—Uwharrie River, SR 1170 between SR 1172 and SR 1169.

Randolph County—Kennedy Road, SR 1547.

Randolph County—Caraway Creek, SR 1314 between SR 1318 and SR 1332.

Randolph County—Deep River, SR 1921 between SR 1929 and SR 1935.

Richmond County—Little River, SR 1148 between SR 1151 and SR 1155.

Lee County—New bridge on SR 1402.

Lee County—Governors Creek, SR 1318.

Davie County—Hunting Creek, SR 1147 between SR

Forsyth County—Fiddlers Creek, SR 2705 between SR 2704 and SR 2743.

Stokes County—Dan River, SR 1668 between SR 1665 and NC 8.

Stokes County—Dan River, SR 1432.

Stokes County—Neatmans Creek, SR 1954 between SR 1955 and NC 8.

Anson County—Lane Creek, SR 1415 between SR 1432 and SR 1435.

Cabarrus County—Rocky River, SR 1394 between SR 1448 and SR 1445.

Stanly County—Big Bear Creek, SR 1134 between SR 1238 and SR 1225.

Stanly County—Big Bear Creek, SR 1968 between SR 1979 and SR 1970.

Mecklenburg County—W. Prong Rocky River, SR 2420 btw. SR 2421 and SR 2418.

Mecklenburg County—Torrence Creek, SR 2136 between SR 2139 and SR 2137.

Union County—Richardson Creek, SR 1649 between SR 1645 and SR 1650.

Union County—Richardson Creek, SR 1710 between SR 1701 and NC 218.

Avery County—North Toe River, SR 1121 between SR 1138 and US 19E.

Avery County—Elk River, SR 1305 between SR 1307 and SR 1357.

Surry County—Ararat River, SR 1727 between SR 1740 and NC 104.

Watauga County—Watauga River, SR 1201 North of US 321.

Wilkes County—Yadkin River, SR 2327 between SR 2318 and NC 268.

Wilkes County—Yadkin River, SR 2303 between SR 2304 and NC 268.

Wilkes County—Roaring River, SR 1990 between SR 2003 and SR 2004.

Yadkin County—Deep Creek, SR 1502 between SR 1503 and SR 1134.

Alexander County—Little River, SR 1150 between SR 1155 and SR 1152.

Catawba County—Ball Creek, SR 1819 between SR 1004 and SR 1833.

Cleveland County—First Broad River, SR 1140 between SR 1142 and SR 1141.

Cleveland County—First Broad River, SR 1121 between SR 1122 and SR 1119.

Cleveland County—Dixon Creek, SR 2283 between SR 2281 and NC 216.

Cleveland County—Grog Creek, SR 1184 between SR 1193 and SR 1194.

Cleveland County—First Broad River, SR 1509 between SR 1513 and SR 1501.

Cleveland County—First Broad River, SR 1832 between SR 1005 and NC 26.

Cleveland County—First Broad River, SR 1809 between SR 1824 and SR 1811.

Gaston County—S. F. Catawba River, SR 1607 between SR 1808 and SR 1809.

Lincoln County—Indian Creek, SR 1177 between SR 1171 and SR 1178.

Buncombe County—Hominy Creek, SR 3431 between SR 3432 and SR 3426.

Buncombe County—Hominy Creek, SR 3431 between SR 3426 and NC 191.

Burke County—Catawba River, SR 1223 between SR 1230 and SR 1227.

Burke County—Catawba River, SR 1233 between SR 1234 and US 70.

Burke County—Southern RR, SR 1102 between SR 1107 and US 70.

Madison County—Ivy River, SR 1565 between SR 1559 and SR 1564.

Rutherford County—Broad River, SR 1005 between SR 1145 and SR 1148.

Rutherford County—Broad River, SR 1111 between SR 1123 and SR 1112.

Cherokee County—Valley River, SR 1388 in Andrews.

Henderson County—Southern RR, SR 1314 between Horseshoe and F. B. River.

Henderson County—French Broad River, Co. Line Bridge SR 1191 to US 64.

Henderson County—French Broad River, SR 1419 between SR 1354 and SR 1420.

Haywood County—E. Fork Pigeon River, SR 1106 in Waynesville.

Haywood County—Pigeon River, Between SR 1519 and SR 1513.

Jackson County—Tuckaseigee River, SR 1397 between Wilmont and US 19A and 441.

Macon County—Little Tennessee River, SR 1659 between US 64 and SR 1653.

Macon County—Cullasaja River, SR 1653 between US 64 and SR 1667.

Polk County—Green River, SR 1331 between SR 1327 and County Line.

Swain County—Deep River, Between SR 1337 and SR 1339.

Transylvania County—French Broad River, SR 1543

Long Road From Durham to Greensboro

(Continued from page 9)

complications. Among these were that the new standards required wide paved shoulders, a wider ditch section, flatter cut-and-fill slopes, wider right-of-way. This in turn required the extension of underground drainage pipes and culverts, additional clearing and grubbing of trees, new ditch lines, widening of bridges, changing ramp patterns, and many other elements of work which could only be accomplished efficiently with large and cumbersome machinery.

Finally the existing lanes had by now been hammered by traffic for many years, including the hauling of hundreds of thousands of tons of construction materials, heavy construction equipment at work, and the like. Therefore the existing lanes had to be resurfaced and strengthened to meet the requirements of traffic on the new Interstate system. This work is done most economically by contracting firms, and these firms buy special insurance with special requirements, involving the removal of traffic from construction operations, to preclude the most hazardous results of mixing high speed traffic with turning heavy trucks and equipment. For these reasons the traffic had to be switched from the old two lanes, and the various segments had to operate with four-lane traffic on the two-lane portion of an expressway.

So the drama has proceeded over the years. The critics have been heard from, and they have been many. The public which has been served has occasionally applauded, but more often has joined the critics, and very often because of a lack of understanding failed to see all the scenes in the drama. The last scene is now coming to a close, with the final curtain expected to fall in late summer—August 1, 1962, with weather permitting.

At that time we will come to the end of one of the most difficult, distasteful, and perplexing problems which the State Highway Commission has ever faced. It is hoped that the above will provide the general historical background for the many events and developments which have occurred during this long effort, and report in retrospect on the basic elements involved.

No great public improvements come without a price, and part of that price is inconvenience. This great highway has been no exception. It has been a long road, a long drama. Surely the time is very close at hand when that portion of the Main Street of North Carolina from Durham to Greensboro may operate as a four-lane freeway, with all possible hazards removed, no stop lights, no delay points, no impediments, and no tolls, rivaling in quality and in service the finest and safest highways in the world.

Highway Employee Killed While At Work

L. Bruce Austin, State Highway Maintenance Foreman IV, died Thursday March 29, 1962, from injuries received earlier when a highway dump truck drove over him.

The accident occurred on a dirt road near Lewiston in an area known as Roanoke River Low Ground. Austin was apparently attempting to adjust the dumping apparatus on the rear of the truck and fell from the running board as the truck began moving.

Austin, 57, began work with the Highway Commission in 1931 and had worked with the Commission for 18 years.

He is survived by his wife, Mrs. Annie Minton Austin, and a son, Lawrence Austin of the home.

CONTROLLER RESIGNS

Ervin Dixon, Highway Commission Controller, resigned recently, and has accepted a position with the Department of Commerce in Washington, D. C.

In a letter addressed to Chairman Merrill Evans, Dixon stated the following:

February 20

Dear Mr. Evans:

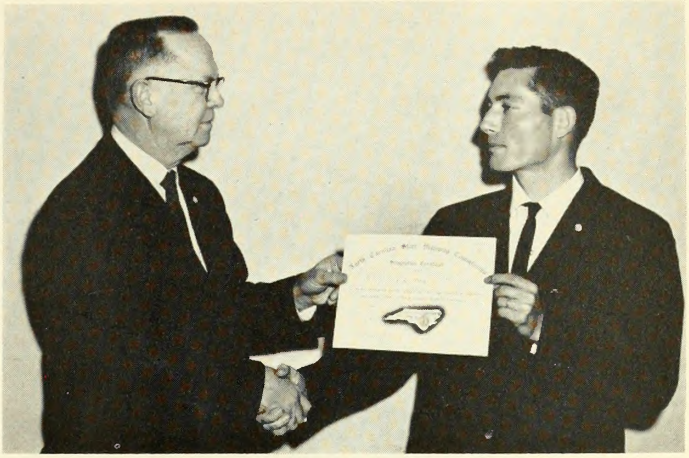
As I discussed with you sometime ago, I have been giving serious consideration to accepting a new position. My plans are now definite; therefore, I submit my resignation as Controller of the North Carolina State Highway Commission effective March 31, 1962.

My work with the Commission has been a most stimulating experience and I have particularly enjoyed my pleasant association with you, members of the Highway Commission, and employees throughout the State.

A Phi Beta Kappa graduate of the University of North Carolina, Dixon joined State Government in 1956 as a highway budget analyst. In 1957 he became controller, and during his tenure, automation was brought into highway fiscal affairs with the installation of IBM machines.

SUGGESTION AWARDS—

(Continued from page 11)



February 21, Fayetteville. RAVON AUTRY. Suggestion: Installation of portable step ladders for prisoners and training qualified men in each division as to flagging procedures.

Golf Enthusiasts

Right of Way Golf Tournament enthusiasts will get together in Raleigh for a State-wide golf tourney.

The tournament, scheduled for May 19 and May 20 is headed by the following members of the GOLF COMMITTEE:

John Holmes; A. Z. Williams, Warner Powell; Sammy Jackson; Bill Tomlinson; and Cliff Carroll.

Entry fees were due in the Raleigh Right of Way Department by April 11.

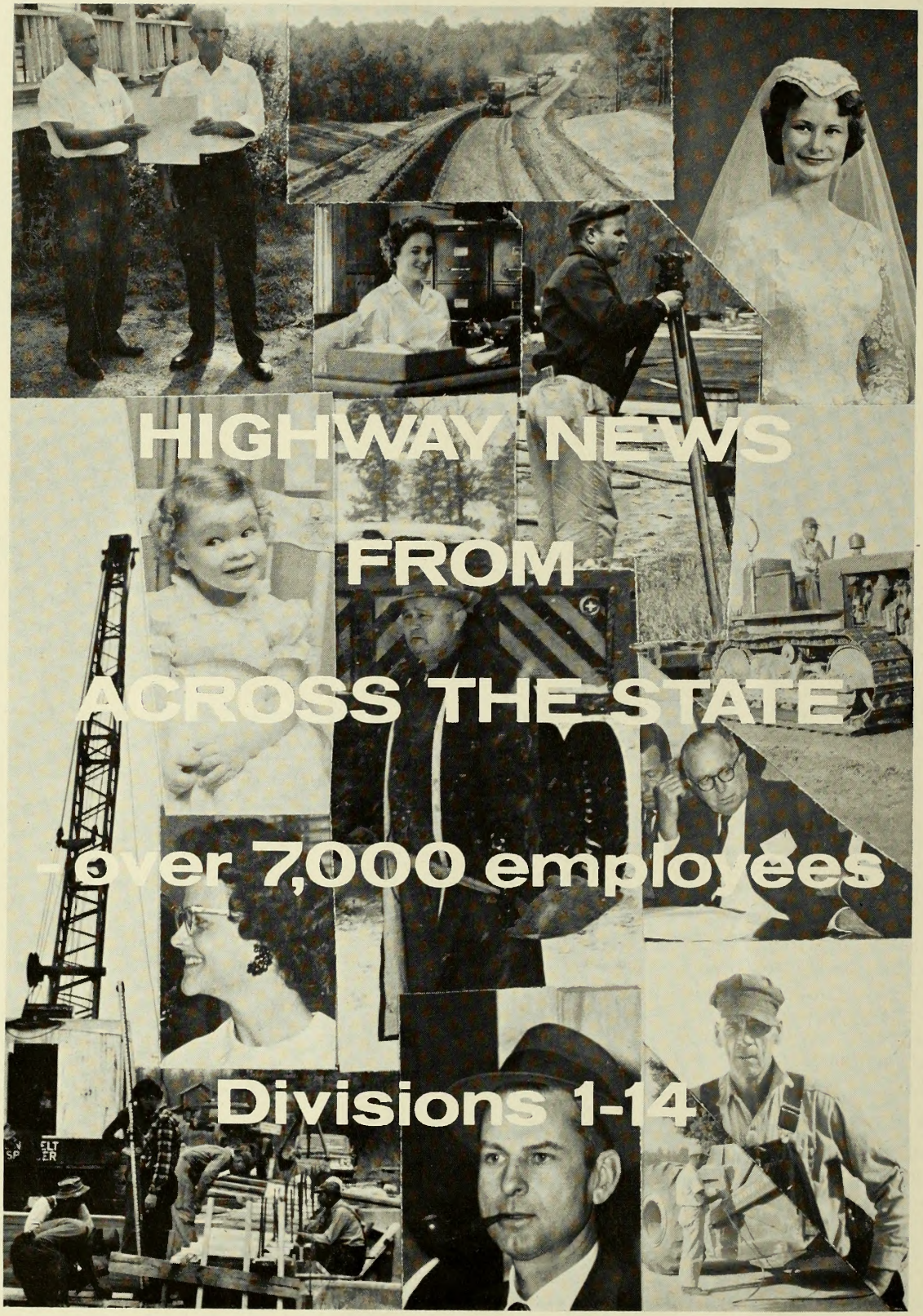
The tournament was originally scheduled for April 28 and 29, but was postponed because of the Carolina's Chapter of the American Right of Way Association Meeting held in Charleston on the same dates.

Association News continued from page 7

DUES SCHEDULES—new fiscal year beginning 7/1/62; graduated according to salary earned at time of payment of dues, per 1961 Convention—

ANNUAL SALARY	ANNUAL DUES PAYABLE	ANNUAL SALARY	ANNUAL DUES PAYABLE
$ 0 to $ 4,124	$ 4.00	10,125 to 11,124	11.00
4,125 to 5,124	5.00	11,125 to 12,124	12.00
5,125 to 6,124	6.00	12,125 to 13,124	13.00
6,125 to 7,124	7.00	13,125 to 14,124	14.00
7,125 to 8,124	8.00	14,125 to 15,124	15.00
8,125 to 9,124	9.00	RETIRED MEMBERS	4.00
9,125 to 10,124	10.00		

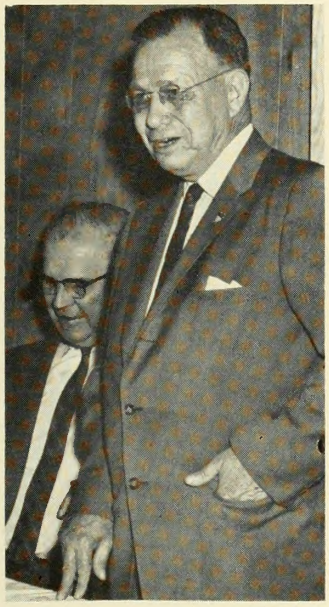
Otis Banks, Secretary


HIGHWAY NEWS
FROM
ACROSS THE STATE
-over 7,000 employees
Divisions 1-14

HEADQUARTERS

By JEWEL ADCOCK

PHOTOGRAMMETRY—This Department is happily anticipating warm weather and the fishing season again. Joining the Department in Feb.-March were draftsmen *Phillip Ennis* of Greensboro; *Michael Farmer*, Goldsboro; *Larry Isley*, Martinsville, Va.; and *Jimmy Strawbridge*, Durham; all State College alumni, along with *Guy Blanton* who transferred from the Cartography Division, Air Force Mapping, Sylva, and *Joe Balickie*, a new addition to the Photo Lab who was formerly with the Army Map Service in Washington, D. C. *John Serbert* has several new faces in his field parties . . . . *William Earl Stevens, Jess A. Sullins, Jr., William E. Shepherd, John G. Connelly, Earl S. Harbison II*, and *Wilbur Gray Batten*. Also new in the Department in Engineering are *Russel Cook* of New Jersey, a State College alumnus, and *Fred Davis* of Rocky Mount, formerly with John A. Edwards Consulting Engineers,



C. S. BIGGS, Accounting Clerk IV with the Bridge Maintenance Department, retired March 30, 1962. He started with the field bridge repair force on August 22, 1922. He came to Raleigh 6 months later as a supply foreman. He joined the Raleigh office as an Accounting Clerk 2 years later.

He is married to the former Mary E. Stephenson and they live at 1829 White Oak Road, Raleigh. He is a member of the American Legion and the Episcopal Church.

In his leisure, he has two hobbies — hunting and fishing — and the only plans he has at the moment is to spend his time fishing with his retired buddies.

Raleigh. A little heartbreaker with black hair is the newest addition at the *John Isley's*. Born March 21 in Rex Hospital, her name is Karen Jean. *Luis Wolf* was glad to have his mother, formerly of Cuba and now residing in Miami, Florida, visit with him for two weeks. Congratulations to *Charles (Doc) Watson* upon his marriage to Joyce Brooks on March 18. *E. J. Page, Chester Gray* and *John Sherbert* went to Washington, D. C. to attend the Photogrammetric Convention in March. *Wayne Robey* reports that he has his boat in the water already and the fishing is great.

CONSTRUCTION—Welcome to *Kay West Lee*. Kay replaces *Mary Murphy* who transferred to Right of Way.

RIGHT OF WAY—Our deepest sympathy to *J. G. Gibbs* upon the recent death of his son, Donald Gibbs. Employees will miss *Collis Lewis* who left to open a Ford agency in Wake Forest. Best wishes to *Rose Ann Harris* who recently resigned to become the wife of Raeford Moore. The couple will live in Norfolk, Virginia. It's nice to have *Adair Pickard* of Winston-Salem as Rose Ann's replacement. Welcome to *Collis Moore, Ray Crawford, Robert Sheets* and *Mary Murphy* who joined the staff recently. Mary was the only member of Right of Way to attend the Wilmington Azalea Festival.

ROADWAY DESIGN — Our deepest sympathy to *Margaret Mills* upon the recent loss of her father. New faces in Roadway are *Alfred L. Avant, Richard D. Croom, Robert T. Harrison, Jr., Harry M. Thompson* and *Allen R. Atkins*. Welcome to all of you. Good luck to *Robert M. Kirpatrick*, who resigned April 20, and to *Walton J. Page*, who left March 23. Congratulations to *Mr. and Mrs. James C. Blackman* upon the birth of a daughter, Kimberly Ann, February 23; and to the *Larry J. McCarson's* upon the birth of little daughter, Sheryl Lynn, born February 12.

BRIDGE MAINTENANCE — Our deepest sympathy to *Mr. R. C. Glenn*, Superintendent in Greensboro, upon the recent death of his mother. Welcome to *Barbara Stephenson*, a new member of the office staff. Barbara previously was employed with REA. An enjoyable luncheon was given Friday, March 30, at the Ranch Motel Restaurant in honor of *Mr. C. S. Biggs*, who retired after 40 years of service with the Bridge Maintenance Department. Co-workers will greatly miss Mr. Biggs. Welcome to *Mr. McKinney*, who replaces Mr. Biggs.

LEGAL — Welcome to *William W. Melvin*, new Trial Attorney in Legal. Formerly with the Attorney General's Office, Melvin came to work for the Commission March 1. *Charles W. Barbee* recently was promoted to Assistant Attorney General with the Utilities Commission. *James F. Bullock* was also promoted to Assistant Attorney General and his new headquarters will be in the Justice Building. Employees wish Department Head *Harrison Lewis* a speedy recovery from his recent hospitalization.

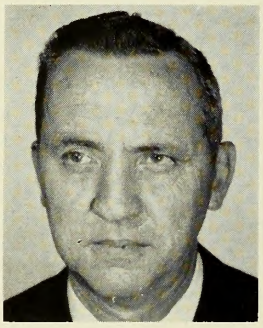
FINANCE—As a farewell tribute to Controller *Ervin Dixon*, who resigned on March 31, the members of Finance met on Friday, March 30 for fried chicken, barbecue and socializing at the Dohun House on Airport Road. The atmosphere at the party was especially gay in spite of the regrets over Mr. Dixon's leaving, and all reports indicate the party was a huge success. Earlier that day, Mr. Dixon was presented a brief case and a gift of money from the Department. Fellow employees wish Mr. Dixon much happiness in his new work. "A little knowledge is a dangerous thing" cannot be said of the men in Audit & Systems Section of Finance! Most of the men recently have completed a course in IBM Programming for the installation of a new IBM System and we imagine most of the men involved have been dreaming of mathematical problems. At any rate, passing in the hall when one of them is at the blackboard explaining one of those complicated-looking problems is very impressive to us laymen (the secretaries, we mean). With the weather so pretty, it gets harder and harder to find an empty booth at Green's . . . . Welcome to *Hilda Fowler*, new accounting clerk.

BRIDGE—*Neill Salmon* is a new trainee in the Department. *George Phillips* changed from trainee to permanent. "Bon Voyage" to *J. S. Browning* who left March 30 to join "Uncle Sam". *Harmon Byrd* resigned to join Consultant Engineers "Whitehead & Zickel" in Charlotte. *Jim Burney* attended the N. C. Democratic Congressional Banquet and Ball in Washington, D. C., March 17. *Guy Alford* recently bought a sailboat and hopes to sail it at Lake Lure this summer where his parents have a cottage. *Gerald White* and his wife, Lou, are real proud of Jennifer Lou, their new baby girl, born February 23. The *Richard Martins* welcomed a son, Jeffrey Walter, February 15. Their daughter, Christine, age 1½, was also a

member of the happy reception committee. *Colleen Garrison,* who left the Department in February, is the proud mother of a daughter, Rebecca Colleen, born March 20. The Garrison's also have a 3-year old son, Billy. (Bridge Location). Congratulations to *Mr. and Mrs. Victor Patrick Thompson* whose little daughter, Jennifer, was born February 27.

LOCATION—Highway fans hope that *Gwen Hester* will be the new "Miss Garner" in the beauty pageant scheduled for May 4. *A. L. Lewis* and *John Buie* recently were transferred from the field to the office force. *Boyce Midgette* and Department Head *Lloyd Cook* went to Baltimore, Maryland for the final editing and proofing of the 1962 black and white highway map. Billy High, a Junior at Broughton and son of *Louise High,* has received the honor of co-captain of the varsity football team next fall. Two honors have been bestowed upon Kathryn Wilson, a junior at Concord High School and daughter of Assistant State Locating Engineer *Raymond J. Wilson* and Mrs. Wilson. Recently she was inducted into the National Honor Society and elected co-editor of the school paper, THE WEAVINGS. Congratulations! Our sincere sympathy to the family of *Odin Baltimore Bestor,* former Chief Locating Engineer, who died February 12. *Frances Smiths'* smile matches the lovely sparkler on her third finger, left hand. Wedding bells will ring in June. (Property Survey Section) It's nice to have *F. E. James* back at work after a month and a half's absence due to a serious operation. Employees are also glad to have *D. G. Hairr* back on the job after a recent operation. New faces are numerous in Property Survey. It's nice to have *Joseph Beane* of Laurinburg; *Thomas Johnson* of Angier; *David Webb,* Cary; *Carlton Rochelle,* Millbrook; *Earl Perry,* Apex; *Gerald Gamble,* Ohio, and now of Raleigh; and former State College students *William Crawford* and *Jim Javid.* Jim is a recent State graduate and a native of Iran. Congratulations to the *Thomas Johnsons* upon the birth of a daughter, Lisa Carolyn, born on George Washington's birthday! Members from this section attending the Wilmington Azalea Festival were *Mr. and Mrs. F. E. James; Barbara* and *Jere LeGwin* and *Jim* and *Judy Duncan. Don Smith* didn't have his rabbit's foot while spring fishing on his recent vacation! His wife rocked the boat and Don lost his glasses. On top of that the fish refused to bite.

"Civitan of the Year"



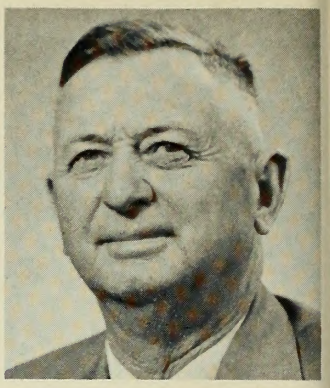
OUR CONGRATULATIONS to LeRoy V. Jay who was chosen "Civitan of the Year" by the Capital City Civitan Club at their April 19th meeting.

Jay has been with the Commission 25 years and is Traffic Survey Manager in the Planning Department.

He and his wife Louise live at 45 Dixie Drive in Raleigh. Their only child, Lou, is a student at Carolina.

TRAFFIC ENGINEERING — *Robert Dodge* and family vacationed at Holden's Beach for several days in May.

MAINTENANCE—*Mr. and Mrs. George Brinkley* and daughter, Betty, went to South Bend, Indiana in May, where the Brinkleys visited their son, George Jr. and his wife. George, Jr. is Associate Professor of political science at Notre Dame University.



W. Vance Yount of the Bridge Maintenance Department retired February 1, 1962 with forty years of continous service with the department. He had been Bridge Foreman in Anson County since 1935.

He is married to the former Icey Beele Pope. They have 5 children and 6 grandchildren. The Younts live on Route 2, Conover, and are members of the Concordia Lutheran Church at Conover, N. C.

He'll have little free time as he plans to do some farming, gardening, and baby sitting with the grandchildren.

PURCHASING — Our heartfelt sympathy to *Betty Wilkins* upon the recent death of her father, J. G. Wilkins. Good luck to *Sue Cox,* who resigned recently. *Olene Ennis* moved up to Sue's place as Clerk III and *Margie Rose* transferred from the file room to take Olene's former job as Typist II.

MAIL ROOM—*Gerald Byrd* and *Nelson Stevenson* are additions to the mailing staff. Notice that happy look on Cary Muse's face since committing matrimony!

MATERIALS & TESTS—Welcome to *Steve Johnston* and *L. D. Porter,* Concrete lab; *Eugene Reynolds,* new trainee in the Bituminous lab.; and *Harry Sears, Richard Lyman, Jerry Wilder* and *Harold Landrum* in the Soils lab. Congratulations to *J. T. Norton* who won 5th place in the recent Harold Long Memorial Golf Tournament.



MRS. ROGER BRADLEY HONEYCUTT of Raleigh is the former Carolyn Beck, daughter of Mrs. C. K. Beck and the late Mr. Beck of Fuquay Springs. The wedding took place February 25 in the Fuquay Springs Baptist Church with the Rev. Charles Dorman officiating.

The bride attended Campbell College and is secretary to R. J. Kimley in Advance Planning.

The groom, son of Mr. and Mrs. Vernon Dowd Honeycutt of Fuquay, is a Carolina graduate and a member of the State Employees' Credit Union staff.

The couple now reside at 1357 Baez Street in Raleigh.

Get well wishes are extended to *R. S. Jivatode* and *Eugene Curtis.*

PLANNING—Good luck to *Marvin Cates* who resigned April 1 to accept a position with the Raleigh Credit Bureau. *James Bradford* has been promoted to head up the Mileage Data Section of the Planning Dept. In the same section, *Maxine Rupy* was promoted to Research Analyst II and *Sam Pearce* to Research Analyst I. (Mapping Section) *Joan Taylor* has been promoted to a Draftsman II.

REPRODUCTION—Did you know that *Charlie Lassiter* recently appeared on TV as a representative of the Optimist Club. Welcome to *Bobby Ragland,* new equipment operator. *Paul Pearson* caught alot of fish on his Easter weekend trip to Lake Waccamaw. *Earl Williams* took his family to his cottage at Bear Creek for a fine Easter weekend of boating, fishing, and water-skiing. He reported the blues, sea mullets and speckled trout were really biting! *Raymond Jones* is busy weekends planting his garden.

PERSONNEL—*Dot Medlin* is back on the job after several days in the hospital with pneumonia. *Fred Parker* went on a two-week tour of duty with the Navy in April. He cruised to Pensacola, Florida and Corpus Christi, Texas.

SAFETY—Welcome to *Marie Griffis,* who replaces Ann Sterling as Clerk III. Marie is a Raleigh native and the wife of SFC Joel H. Griffis, who is stationed in Korea. They have three daughters, age 16, 4 and 2, and all are looking forward to Daddy's return to the States in July. It's nice to have *Miss Laura Jones* of Clayton as a temporary Steno in Safety. Laura was formerly with the ABC Board.

DIVISION ONE

By ROY E. WEST

Division Correspondent

SPENDING SPRING HOLIDAYS at home is Robert Carroll Vanderberry, Jr., son of *Mrs. Nedra Vanderberry,* Stenographer in District II. Robert was recently initiated in the Sigma Nu Social Fraternity at the University of North Carolina, where he is a freshman. He was recently elected House Manager for his fraternity for 1962-1963.

BACK AT WORK: *W. H. Mosely,* after spending several months in Roanoke-Chowan Hospital, Ahoskie; *Howard Bray,* Bridge Tender at Manteo, after surgery in Norfolk, Va.; *E. Cecil Owens,* after a sick weeks' leave due to a heart condition.

NEW RIGHT OF WAY AIDE, *Robert S. Cross,* moved to Ahoskie with his family. He was formerly in the Raleigh office. Welcome!

GET WELL WISHES to: *R. C. Speight; Miss Betty Turner,* daughter of *Major R. L. Turner,* Prison Supervisor in Div. 1, who is recovering from an appendicitis operation; *J. K. Spruill,* Maintenance Foreman IV; *Howell Warren* and *J. E. Phelps; Bruce Hoggard,* Truck Driver in District 2, who suffered a heart attack April 12.

SYMPATHY is extended to the family of *W. O. Sessoms,* who died after a recent heart attack; Mrs. Bruce Austin and son Lawrence, on the death of *Mr. Austin;*



ROUGH 'N READY

COWBOY LEE SHEARIN is a pistol packin' little man from down in Greenville. He's a good lookin' hombre, and belongs to Mr. and Mrs. S. H. Shearin. Lee's Dad is an Area Appraiser in the Right of Way Department.

and to *Gurley W. Lawrence,* Maintenance Foreman I, in the death of his wife.

IN CHARGE of contract construction in Bertie and Martin Counties, *Ray J. West* has now opened a Resident Engineer's office in Williamston to more easily facilitate business down in that area.

BEST WISHES AND HAPPY DAYS for *J. D. Selby,* Bridge Tender and *F. T. Combs* Machine Operator 4 who recently retired. Selby retired after 16 years with the Commission. Combs retired on disability on March 6. We wish them both enjoyable retirement.

DIVISION THREE

By IRENE HEWETT

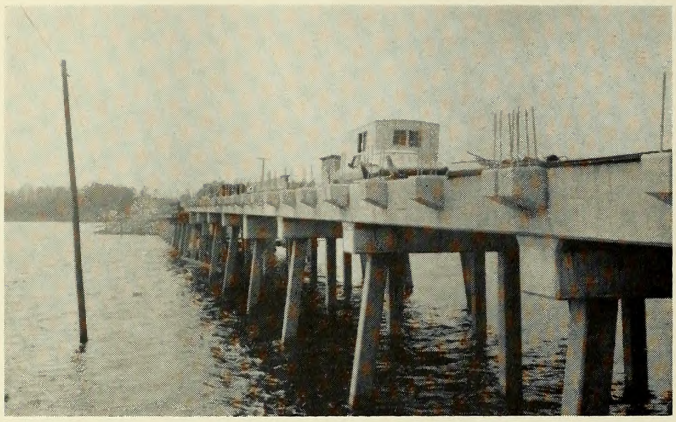
Division Correspondent

AZALEA FESTIVAL WEEKEND brought in many out of town visitors to Wilmington. *Mrs. Leo Wallace* had as her guest, her sister, Anne Montgomery of Jacksonville, Florida.

WE'RE EXTENDING WELCOMES to *Michael Foley McDaniel Charles Curits Honeycutt, George Kellum* and *Frank Alan LeRay,* all with the Construction Department. Also, Ed Hamme was recently transferred to the Right of Way office in Wilmington, and previously was down in Division 6 at Fayetteville.

SORRY TO SEE *J. P. (Pat) McArthur* leave us. He was transferred to Fayetteville, and while here, was with the Right Of Way Department.

RESIGNATIONS have been submitted by *A. E. Spell* and *John M. Williams* of District 2. Both are accepting other employment.



This structure is being built across Queen's Creek in Onslow County at an estimated cost of $94,000.00. Kitchin Construction Company is the contractor and J. W. Hamilton is Resident Engineer.

OUR SYMPATHY is extended to the family of *Edwin F. Wells,* who was a Highway Inspector with the Construction Department. Wells died of injuries received when hit by an automobile in January. Ed had been with the Commisson about 29 years, and will surely be missed. Also, we extend sympathy to *Robert A. Jenkins,* also of the Construction Department, in the recent loss of both his Mother and Father.

DIVISION FOUR

By JERRY BOYKIN

Division Correspondent

BATTLE CREEK, MICHIGAN was the location for the Radiological Defense Course for Instructors. Attending this school was *Donald Overman,* District Engineer in Nashville.

NEW EMPLOYEES: *G. N. Alridge,* Right of Way Department; *James Bass,* Clerk II, Nashville District Office; and *Bennie Sherin,* Mechanic, Nash County Equipment Department

TRANSFERRED TO WELDON recently were *R. E. Deanes* of Tarboro; *J. E. Skinner* of Roanoke Rapids; *V. L. Jones* of Tarboro; *R. A. Moore* of Littleton; *L. H. Cameron* of Enfield *L. P. Fleming* of Halifax; and *A. W. Vaughan* of Roanoke Rapids.

EMPLOYEES WERE SADDENED by the untimely death of *James Edward Cooper* on March 7, in Roanoke Rapids Hospital of a heart attack. Condolences to his wife, Lelia M. Cooper and parents, Mr. and Mrs. T. A. Cooper, all of Weldon. Cooper was Maintenance Yard Foreman at Weldon.

BACK AT WORK after illness are: *H. L. Braswell, Charlie Narron, J. E. Joyner* and *G. H. Griffin* with Nash County Maintenance; *John Williams* with Wilson County Maintenance; and *Mose Rackley* with Nash County Equipment Department.

FAREWELL AND BEST WISHES to *Layton Tart* of the Right of Way Department, who resigned to return to college.

CONGRATULATIONS are in order for the *Alton Dickersons,* proud parents of a new baby girl, Laura Ann, born February 1; *Mr.* and *Mrs. S. R. Livesay,* new grandparents.

VISITING IN VIRGINIA recently were *G. T. Wilkins* and his wife who went to see their son and daughter in Hampton and Portsmouth.

GET WELL WISHES to *"Sam" Livesay,* Division Office Manager who is at home, recovering from a trip to Carolina General Hospital.

DIVISION FIVE

By PEGGY BRIGHT

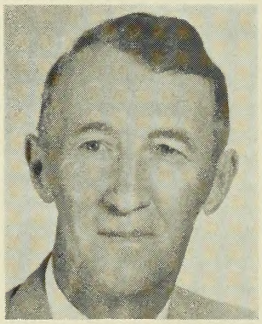
Division Correspondent



MASTER FRANKLIN THOMAS CURLEE will have a birthday coming up in a couple of months. He's the son of Ruth Curlee, Steno in the District Office, and Sandy T. Curlee. Some say those good looks were inherited from his Mom!

WELCOME to *Mona Pendergrass* who is a new steno in the Right of Way Department.

NASSAU vacationers, *C. L. Edwards* and his wife, report that "it is quite a place". Edwards is a District Engineer. Others who have been on vacation recently are: *W. M. Cole; E. B. Critcher; M. A. Ellington; W. A. Ellington; R. A. Mathews; L. L. Reece* and *H. B. Royster.*





Right: B. F. Vaughan has been appointed Road Maintenance Supervisor in Person County. He succeeds Kyle Jones, who has retired. Vaughan began his work with the Commission in 1931 in Durham County as a Section Foreman. He has held various positions and was Area Foreman before his appointment.

Left: Road Maintenance Supervisor Kyle Jones retired on February 1 due to his health. Jones had been with the Commission for the past 37 years. He came up thru the ranks as a rodman in 1925 and has held such jobs as Junior Inspector, Truck Driver, Floating Gang Foreman, Supervisory Foreman, and he became Road Maintenance Supervisor in 1943. We all wish him the best of luck and happiness!



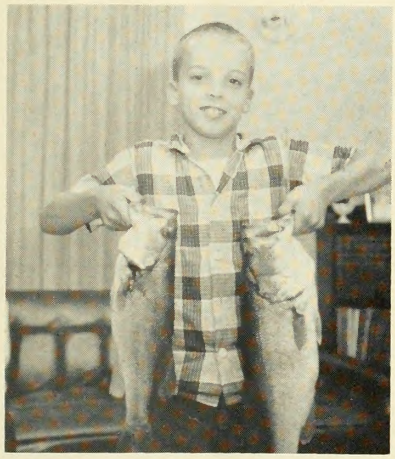
James B. "Hoss" Alford, left, and his brother, Johnny, were very successful in their recent hunt. James, a Maintenance Foreman 4 in Franklin County, refuses any information on that "real happy hunting ground"!

GRANVILLE COUNTY employees enjoyed a supper of Brunswick Stew at the Maintenance Quarters recently. *Albert May* and *George Woody* did a fine job of preparing the stew.

FOX HUNTING enthusiast *William Reems* recently bought a horse to ride on the hunts.

SYMPATHY is extended to the family of *H. T. Porterfield* who died on April 1, 1962. He had been with the Highway Commission since 1931.

U. S. ARMY inductee *K. R. Garrett* just joined Uncle Sam's "Group" on March 29. He was working in the Maintenance Office in Person County before going into the Army.



"HUCK FINN" dreamed of fishing days like the one Mike Ellington had. Mike is the son of Mr. and Mrs. William A. Ellington of Granville County, and Dad is a Machine Operator with the Maintenance Department.

DIVISION SEVEN

By P. L. WELCH

Division Correspondent

A WEIRD, long-necked nomadic bird called the stork has been working overtime in the Right-of-Way Department. The bird was headed the right way, but had a one-track mind: All Boys! The smiling, happy families are: the *F. D. Morgans*—the bird swooped in and dispersed a bundle named Franklin Scott Morgan, 9 lbs., 2 oz; Friend stork then arrived at the *Thomas E. Hinson's* residence and left Master Tommy Hinson, Jr.; the latest safari the familiar bird made was to the home of *Lois* and *Charles Hodges* and delivered Andrew Charles Hodges, weighing in at 8 lbs., 8ozs. . . .Mama Lois, a Steno II for the Right-of-Way Department, is being kept busy at home, so *Mrs. Betty Thompson* is helping out at the office. Betty is the mother of three girls and one boy. She is a native of Mt. Airy and is married to Fred Thompson.

NEW EMPLOYEES: *Mrs. Shirley Tuttle,* a 1961 graduate of Woman's College, as a Steno I. She is a native of Winston-Salem, and worked with the National Cash Register Company in Dayton, Ohio, before joining the Highway Commission. *M. F. Lewis,* Aide I with Right-of-Way, a graduate of N. C. State College, and a native of Roseboro, N. C.

DIVISION EIGHT

By VIRGINIA WILLIAMSON

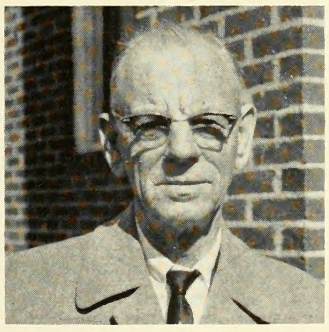
Division Correspondent

20 YEARS OF SERVICE is a proud record for *Roy Jester* who retired from the Commission recently. He held many jobs with the Commission as truck driver, foreman, gang foreman, and at the time of his retirement, was Maintenance Foreman II in Randolph County. He will be missed by fellow employees who join to wish him a happy retirement.

ROCKINGHAM'S NEW DISTRICT OFFICE is progressing well according to *E. C. Darden,* District Engineer.

NEW EMPLOYEES: *Mrs. Hattie Tullock,* Secretary, Right-of-Way Department; *Beverly Ball* and *Haskell Duncan,* Right-of-Way Department; and *Fred Whitesell,* Highway Engineer II with the District 2 office.

TINY TOTS are new members of the Highway Commission's growing family. Recent arrivals are: a baby

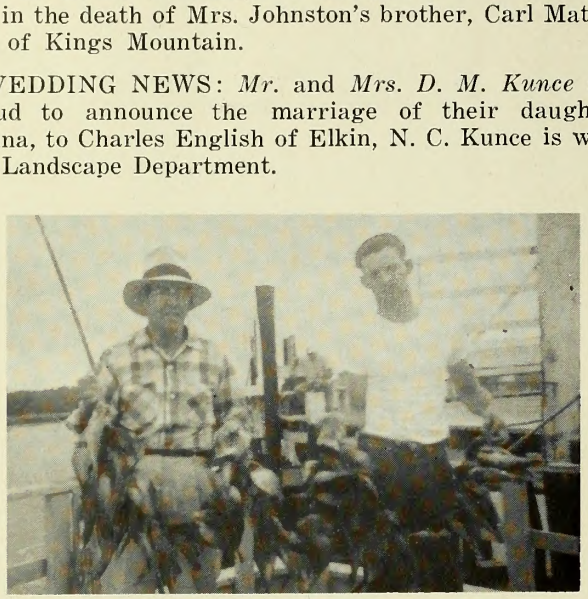


Working with the Highway Commission has been something of a long-time association for Luke H. Wilson. He began back in 1921 as Assistant District Accountant under John D. Waldrop. In 1922 he was assigned sign work with this Division, and was the first Sign Supervisor for the State. He directed the first center-line painting and sign erecting. He continued in Sign Work until his retirement last November as Sign Supervisor. Wilson is an elder in the Faith Presbyterian Church at Guilford College, where he and his wife reside. Both of his sons are engineers—one in Florida and one in South Carolina. He is presently employed with Grant Chemical Co., Greensboro.

boy to the *William Garners* in District II; a baby girl for *Mr.* and *Mrs. Luther C. Nickens,* District II; a first grandchild to *Mr.* and *Mrs. Douglas Patrick* of the Landscape Department; and a baby boy for the *C. L. Ellis* family, District II.

SYMPATHY is extended to *Mr.* and *Mrs. T. C. Johnston* in the death of Mrs. Johnston's brother, Carl Matheson of Kings Mountain.

WEDDING NEWS: *Mr.* and *Mrs. D. M. Kunce* are proud to announce the marriage of their daughter Donna, to Charles English of Elkin, N. C. Kunce is with the Landscape Department.



TWO FISHERMEN and a big catch! Thomas Williams and his son Donnie went fishing at Little River, S. C., and netted 100 lbs. of black bass. Proof positive for the non-believer!

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

NEW EMPLOYEES here in Division Nine are: *Jackie Holt,* Steno II in the Appraisal Dept.; *Don Cox,* Division Appraiser; *Tom Whitlock,* Division Appraiser; *C. B. Chaffin, J. E. Ferebee,* and *G. D. McDaniel,* truck drivers in Davie Co.; *L. Pulliam,* Machine Operator I in Stokes Co.

A YOUNG MISS named Tamera Lynn arrived at the *C. A. Leazer* home in Salisbury on March 7, weighing in at 7 pounds, 13 ounces. Leazer is a truck driver with the Rowan County Maintenance Department.

WE'RE HAPPY to have *T. R. "Tom" Fulghum,* Inspector with the Rowan County Construction Department, back at work after an extended illness. Also looking well after an extended illness is *G. A. Beale,* Maintenance Foreman I in the Forsyth Co. Maintenance Department.

GET WELL WISHES TO: *H. A. Parker, Jr.,* Rowan County Maintenance Department; *L. C. Wright,* Maintenance Foreman I, Forsyth Co.; and *O. C. Tuttle,* Maintenance Foreman I, Stokes Co.

GOOD LUCK and smooth sailing to *Roy Moore,* Division Appraiser in the Appraisal Department, who has decided to go into business for himself as a real estate appraiser.

SYMPATHY is extended to: *P. O. Young,* District II and *R. N. Shultz,* Forsyth Co., upon the deaths of their fathers; *J. W. Stone,* Stokes Co., on the death of his father-in-law; *Bob Young* upon the death of his mother, Mrs. Lula Young of Massachusetts; *James Flinchum,* Stokes County, on the death of his mother; and *S. M. Pressley,* Sign Shop Foreman, at the death of his father.

DISTRICT II employees extend sympathy to the family of *C. B. Seats,* who passed away after an extended illness. Seats had been with the Highway Commission for 31 years. Also, deep regrets are felt for the family of *R. Y. Pegram* who passed away recently. He had been with the Commission since 1945.

WE HEAR contestant winners, the *Grady Luptons,* are trying out a new contest—this one with a trip to Europe! They had a grand time in Miami, Florida after winning a Trip there sponsored by the Sunshine Biscuit Company over Radio Station WBT.

SOUTH OF THE BORDER tunes are still being hummed by the *Jim Fosters.* Seems they cha-cha'd down to Mexico in December, and loved it! Senor Foster works with the Construction Department in Salisbury.

GRANDFATHER TROXLER, otherwise known a *P. S. Troxler,* Road Maintenance Supervisor for Davie and Stokes, is mighty proud of his grandson, Michael Delane Troxler, born November 18.

DIVISION TEN

By C. E. COLLIER

Division Correspondent

ARNOLD PALMER'S GALLERY contained at least one member of the Highway Commission. Highway Engineer *Ted Funderburk* went down to Augusta, Georgia to witness Palmer win the Master's Golf Tournament the weekend of April 6.

MARSHALL A. SMITH, a young man 18 years old from Scotland County, joined the Highway Commission back in 1922. He became a floating gang foreman, traveling all over the State. As a section foreman, he settled in Anson County in 1931, later becoming a gang foreman. In 1959 he became a Maintenance Foreman IV. Soon afterwards he was forced to retire due to extended ill-



TWIN DAUGHTERS of "Bill" Scarborough, Construction Inspector, are looking forward to a big summer. Linda, left, and Brenda are high school freshmen in Union County.





LEFT: New addition to the Division 14 office staff is Miss Nancy Breedlove, daughter of Mr. and Mrs. C. F. Breedlove of Bryson City. Nancy, a graduate of Swain County High School and Ashmore Business College, is employed in the District 1 office in Bryson City. RIGHT: Nancy Dean is replacing C. L. Profitt in the Road Oil Department. She received her education at Sylva High School and Western Carolina College. Prior to employment with the Highway Commission, she worked with Moody Rnlane Gas Company.

ness, and officially left the Commission on February 28, 1962.

That isn't quite all the story. Besides being an amateur baseball player of some renown in his youth, Smith is also known for his "tall tales" . . . This is one of them:

> "Back in September 1945, Anson County had quite a freshet. Brown Creek on US 74 was out of its banks with 2 feet of water over the highway. A truck, attempting to go through it, got stuck and drowned out on a shoulder at the edge of the 10 foot fill. Smith, wearing his hip boots and raincoat proceeded to see what could be done to prevent the truck from being washed over the fill. In so doing, Smith was washed from the highway and landed in a tree some 100 feet or more from the road. He removed his boots and raincoat, placed them in the tree, and made an effort to swin out, the water was too swift, so it was back to the tree for him. After tree sitting about an hour, his men floated an inflated intertube with rope attached and pulled him to safety. . . .

And those were the good ol' days!

There is a tale that Smith doesn't tell—he is a devout Christian, the father of 3 daughters, and a good citizen of Polkton, N. C. He retires from the Highway Commission with 40 loyal and faithful years behind him. We wish him a speedy recovery and many years of pleasant retirement.

FISHERMEN *J. F. Turner* and *J. P. White* "tell us they are having real good luck catching bass and bream. . . they're also keeping their friends well supplied.



NATIONAL HONOR SOCIETY member Vicky Church was one of 15 Shelby High School seniors tapped into the Society. She is the daughter of District Engineer J. I. Church and Mrs. Church. Students are chosen by the faculty on the basis of scholarship, character, leadership and service. Congratulations Vicky (and to your parents as well!).

STORK visits brought a daughter, Marsha Lynn, to the *H. R. Polks;* and a son to the *F. C. E. Yows.*

CONGRATULATIONS TO: *R. B. Edwards, J. Perry Jr.,* and *B. J. Williams* on their recent promotions.

DIVISION TWELVE

By JEAN CLINE

Division Correspondent

SPRINGTIME arrived and Iredell County employees got together with some of their friends for a barbecue with all the trimmings at the Monticello School near Statesville on Friday, April 13.

COMPACT CAR OWNERS who have been buzzing around in their new cars are *W. H. Barrett* in a Ford Falcon and *M. E. Wilson,* sporting a Valiant.

BACK AT WORK after recent illnesses are Duron Bridges and Horace Lowrance; Road Oil Department; and Fred Summers, Sign Department.

WELCOME to *Noel J. McGinnis, P. W. Street* and *Robert H. Hoyle,* Construction; *Joe D. Roberts,* Clerk, District I; *Thurman P. Scism,* Landscape Department who became permanent February 10; *Donald P. Wilson,* a 1961 graduate of N. C. State College, and *Joe Hough,* a Gaston Tech grad who recently joined the Engineer Training program of the Location Department.

PROMOTIONS: *Bill Bradshaw,* Road Oil Department is a new Road Oil Foreman; and *Miles Hughes, M. E. Wilson,* and *W. A. Garner* were promoted with the Shelby residency.

SYMPATHY is extended to: *A. F. Simmons* of the Road Oil Department upon the death of his brother; *Clint Hastings* on the death of his sister; *Ralph M. Harrill* on the death of his sister's child.

DIVISION FOURTEEN

By D. V. RAXTER

Division Correspondent

AFTER 32 YEARS with the Highway Commission, *George B. Thompson* retired on January 31. Thompson, Thompson, Supervisory Foreman in Clay County. Best wishes in your retirement!

ALSO RETIRING is *James E. Head.* Maintenance Foreman 2 in Haywood County. He began work with the Commission in 1931 and since that time has been a machine operator, gang foreman, and retired as a Maintenance Foreman 2. He was a faithful employee and will be missed by all.

WELCOME to *William R. Brown,* N. C. State graduate who is working with the Maintenance Department in District 1 as a trainee.

BACK AT WORK: *Carl O. Ray,* Truck Driver in Haywood County, after a lengthy illness; *C. E. Constance,* Maintenance Foreman 2 in Polk County, after serious injuries suffered in an automobile accident; and *J. W. Pittillo,* Road Maintenance Supervisor, after a long illness.

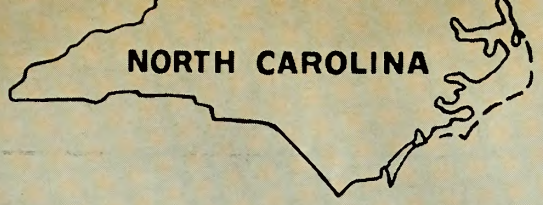
A SPEEDY RECOVERY to *R. B. Hall,* Maintenance Foreman 2 in Polk County, who has been disabled for a long period of time.



Fishermen heading for coastal North Carolina will have little trouble getting to the famed fishing grounds along the Outer Banks. The inlet cutting into the lower part of Hatteras has been bridged and open to traffic. Ferries are operating on a summer schedule, and the Highway Commission reports travel in the area has already increased. The photograph was taken at Cape Hatteras. (Courtesy News Bureau, Dept. Conservation and Development.)

Form 3547
ROADWAYS
State Highway Commission
Raleigh, N. C.

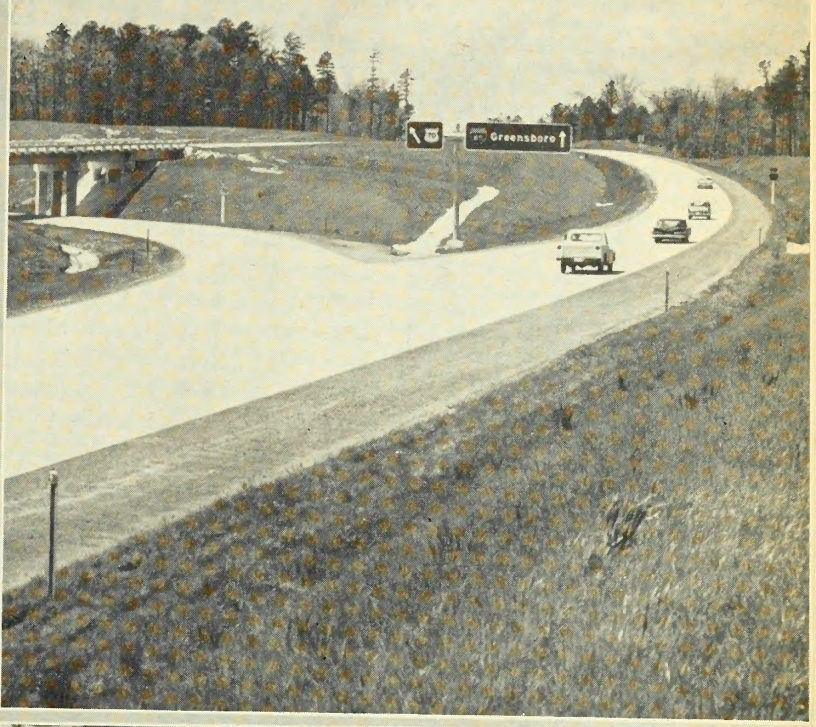
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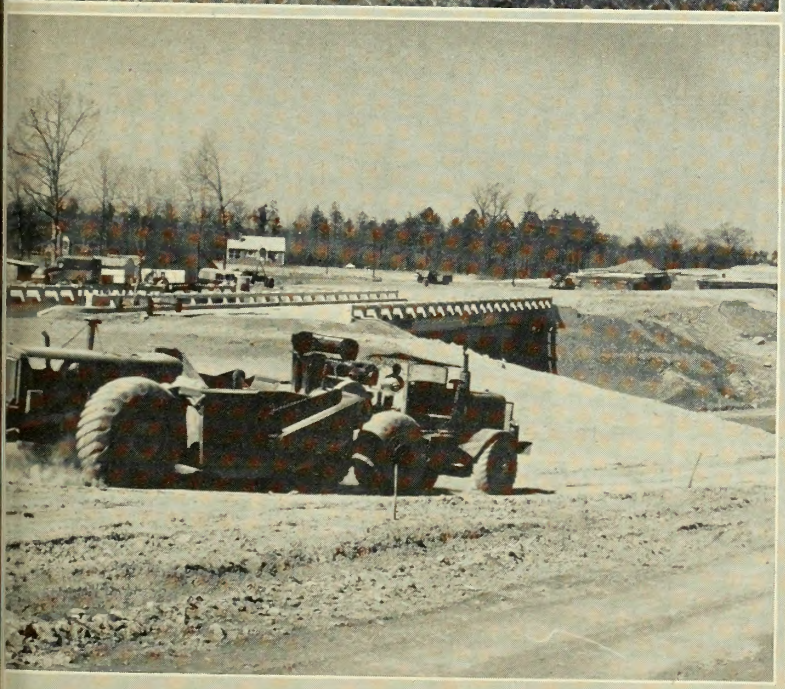
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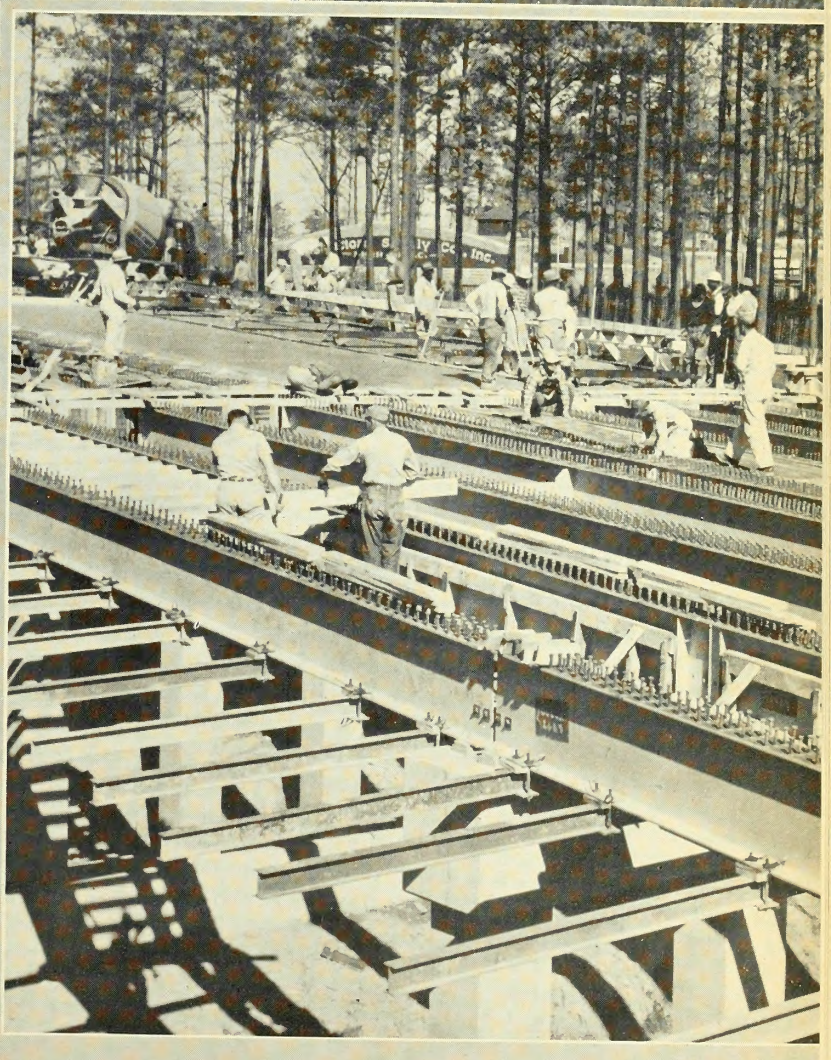
ROADWAYS

MAY - JUNE, 1962



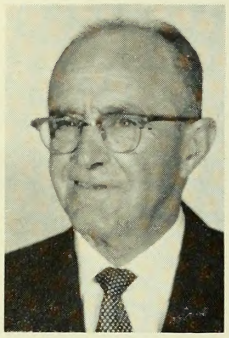






A MAGAZINE FOR EMPLOYEES OF THE STATE HIGHWAY COMMISSION

T. J. McKim Retires On August 1, 1962



McKim

Division Three Engineer T. J. McKim announced June 18 that he will retire on August 1, 1962, after 40 years of service with the Highway Commission.

McKim joined the Commission upon graduation from Purdue University with a degree in civil Engineering. He started as an instrumentman at Robersonville, and worked on the grading of U S 64 from Williamston to Bethel. In 1925, he was made in charge of the concrete road from Leechville to Swan Quarter. The following five years he supervised various paving jobs in Beaufort, Pitt, Martin, Hertford and Gates Counties. In 1931, McKim was made maintenance supervisor for Northampton and Halifax Counties. In 1937 he was promoted to District Engineer, located at Asheboro, and in charge of work in Davidson and Randolph Counties. The same year he was promoted to Assistant Division Engineer and supervised construction in the old Sixth Division.

During World War II, he acted as both Road Oil Supervisor and District Engineer when two highway engineers went in service. In 1945, he was named Division Engineer at Ahoskie, succeeding J. C. Gardner who retired.

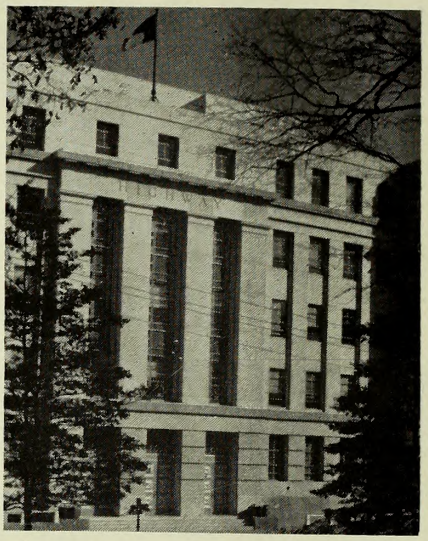
In 1949 he was transferred to Wilson to head up the Fourth Division. In 1953, he was made Senior Construction Engineer. In November of 1957, was promoted from Senior Construction Engineer to State Construction engineer. Upon his request in 1959, he was transferred to Wilmington where he became Division Three engineer for the 6 county area.

It was announced that McKim's replacement will be Richard Von Biberstein, Assistant Division Engineer in the Third Division. Biberstein has over 40 years of service with the Commission, and has held various engineering jobs across the State. He is a native of Charlotte, and joined the Highway Commission in June, 1921. He began as a rodman in that area, and has worked as an instrumentman, Resident Engineer, District Engineer, and has been Assistant Division Engineer in the Third Highway Division since 1953.

Paul J. DuPre, Area Maintenance Engineer for the central part of the State, has been named Assistant Division Engineer in the Third Highway Division. DuPre will take Richard Biberstein's place who has been named Division Engineer, following the retirement of T. J. McKim.

DuPre has 22 years of service, and prior to his appointment as Area Maintenance Engineer, was Assistant Division Engineer in Division 14.

ROADWAYS MAGAZINE



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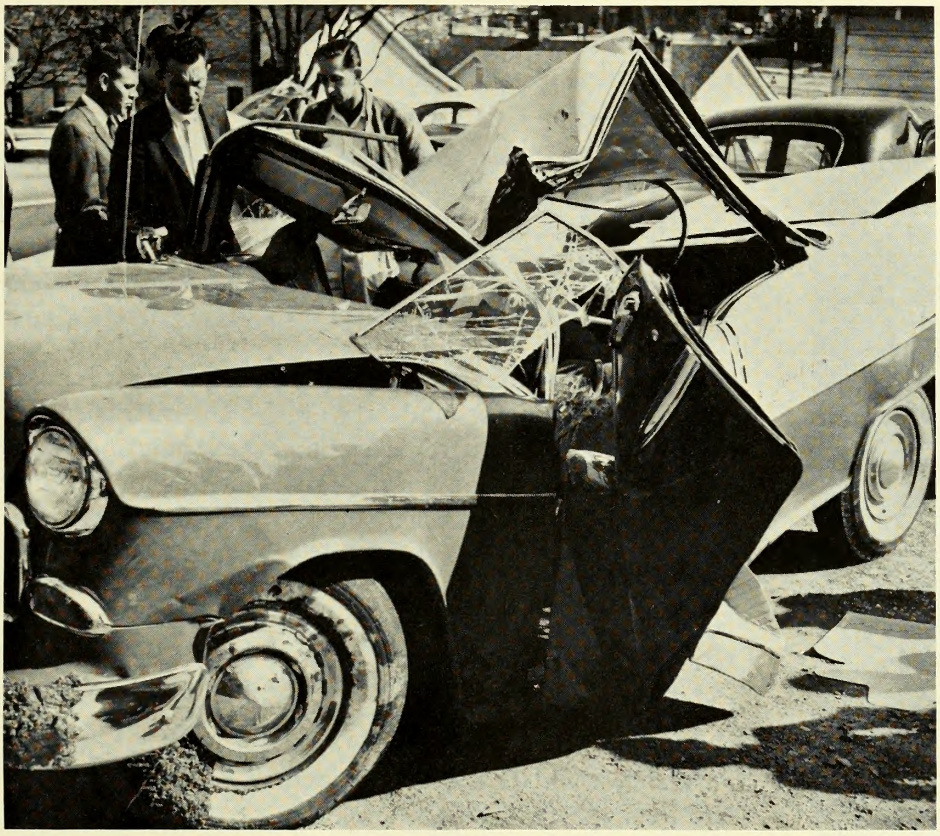
W. F. Babcock.....Director of Highways

Ben Roney.....Director of Secondary Roads

PROJECT IMPACT

"This entire project is dedicated to one purpose: preventing accidents and thereby reducing the suffering of the people."

Governor Terry Sanford, in a meeting on May 30, in Raleigh outlined an all-out drive to reduce traffic accidents and deaths in six counties. It is a pilot program in three sections of the State, including the counties of Cumberland and Robeson in the East; Forsyth and Guilford in the Piedmont; and Buncombe and Haywood in the West. In general, the project will attack the auto collision program from three directions—engineering, enforcement and education.

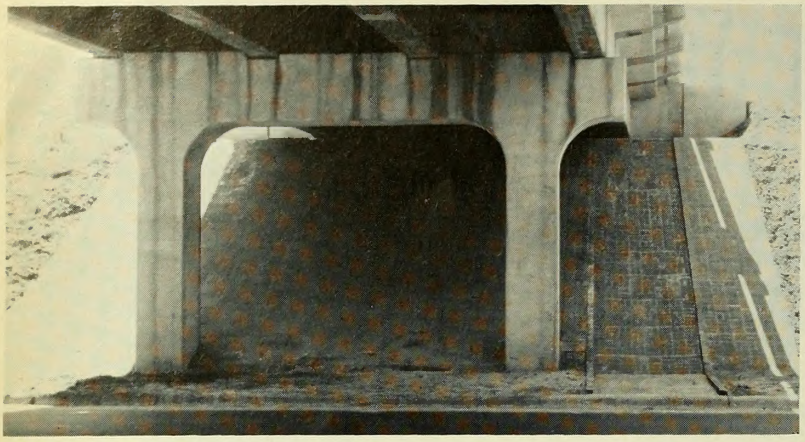


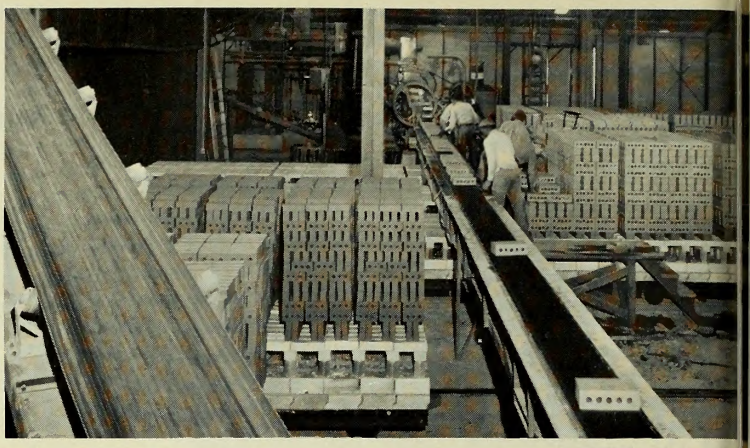
In cooperation with this program, the Highway Commission will seek to make highways in the target areas safer in a number of ways—through better marking, signing and signalling. Speed zones and traffic hazards will be studied to improve safety. The Department of Motor Vehicles plans to shift additional manpower into the six counties, and Commissioner Ed Scheidt stated "We will use every means at our command" to enforce the traffic laws.

Meeting have been proposed so that highway officials, highway patrol officers and local officials in the counties under the program can discuss specific programs.

Governor Sanford, in his discussion of "Project Impact", told the group that "The reason for this project lies in the conviction that the only way to reduce traffic accidents is by official action which is fully supported by the Public."

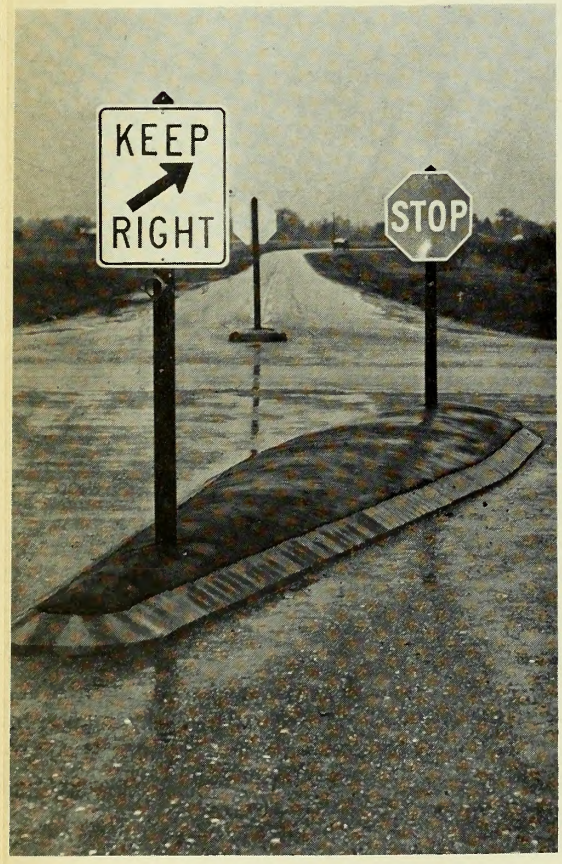
Courts and local authorities in each of the target areas will be requested to give full support to the Governor and State leaders.





LEFT: Grassless slopes such as this one on NC 54 in Chapel Hill have been banked with brick to prevent erosion . . . just one experiment in advanced construction with an age-old product. RIGHT: North Carolina is known as "The Brick Capitol of the World". Raw shales and clays are mined in vast quantities, and production has increased throughout the years.

BRICK — EXPERIMENT IN CONSTRUCTION



State highway engineers and members of the brick industry worked together to develop a specially designed brick unit with shape and proportions mathematically computed for best service. The safety island above has been hit on several occasions with no resulting damage other than tire marks.

Brick production which is now ranked as a major industry in North Carolina, was ironically impossible during the early years along the Carolina seacoast. Inadequate transportation systems prevented the development of an industry which 200 years later was to make North Carolina the "Brick Capitol of the World".

During colonial times, England had to supply most of the brick for construction. As the roads and highways began to link towns formerly accessible only by water, the huge deposits of clay and shales were developed into profitable brick-making plants. The interdependence of highways and brick production recently turned into an experimental project to test brick uses for highway construction purposes. One such test project is the use of brick for safety island curbs. The contrasting red color eliminates painting, and the use of small increments facilitates easy patching of broken sections. Another project still in the experimental stage is the use of brick paving to control erosion on the grassless slopes underneath bridges. Again, the color seems to offer a pleasing contrast to the prevalent white concrete and black asphalt.

Reports on the projects have been favorable—the brick offers a neat appearance, and no repairs have been necessary so far.

This year it is estimated that over one million tons of North Carolina-made brick will roll over Tar Heel highways, veritable proof that good highways mean good industry for North Carolina.

Dignitarios Visitan en Carolina del Norte

On the morning of June 4, 1924, special pullmans arrived at the Raleigh Train Depot with a delegation of dignitaries seldom witnessed in this area of the country. Arriving in Raleigh were delegates from Argentina, Bolivia, Brazil, Chile, Columbia, Coasta Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatamala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela and 18 representatives from the Department of Commerce, Highway Education Board, and the National Automobile Chamber of Commerce. In addition were official photographers, newspaper men and a number of unofficial visitors who were to accompany this international clan on a real "cross-state" highway tour.

This group composed the Pan-American Highway Commission, and North Carolinians were indeed going to display some true southern hospitality during one of the most unusual visits the North Carolina Highway Commission has experienced in many years.

H. K. Witherspoon, Editor of ROADWAYS during that time, wrote the following account of this gigantic tour:

". . . delegates were met at the depot by representatives of the State Highway Commission and of the civic organizations of the city, and carried them to the Sir Walter Hotel where they were entertained at breakfast. While this was in progress the motor caravan which was to transport the party across the state was formed in front of the hotel and at the conclusion of the breakfast, the party was carried to the Governor's mansion where an informal reception was held by Governor Morrison."

Following the reception, the delegates were taken to the Highway Building, and Witherspoon comments that a great deal of interest was shown in the drafting rooms where road and bridge plans were prepared. Afterwards, Frank Page, then Chairman of the Commission, took the group on a tour of the area, stopping in Durham, Chapel Hill and Greensboro. (A busy tour for a first day's visit.)

The caravan continued, next stopping in Reidsville. Delegates witnessed the actual construction of plain concrete road as it was carried out in those days. Charles Upham, Chief Engineer, had planned this tour carefully, and explained in detail every phase of operations. In turn, this was translated into Spanish by one of the visiting engineers. After several stops, the caravan went to Yanceyville where a well-known road contractor named Nello Teer of Durham, provided an old-fashioned barbecue. It was old-fashioned in every sense of the word—10,000 people turned out en masse for the occasion!

Highlighting the tour was an exhibition at the Central Carolina Fair Grounds. The American Road Builders Association had provided every kind of machinery used in modern road construction. Editor Witherspoon says: the machinery . . . *"was in actual operation, from a large power shovel which dug an enormous hole in the center of the grounds to the demonstration of a well-known brand of shovel that was "trouble proof".*

Traveling on to Winston-Salem, the delegates were entertained at the Robert E. Lee Hotel, and that evening one of the most elaborate banquets was given. The menus *". . . were rather unique . . . being printed on a plug of sun-cured chewing tobacco".!*

The caravan moved on westward, and at each place, banquets, dances, and tours were given, with all the aplomb possible. During a stop in Sylva, the Cherokee Indians living in the vicinity staged an Indian version of a baseball game which Editor Witherspoon compared to a combination of baseball, football and wrestling.

Results of the visit were termed as great successes. The advertising gained by the State and the bonds of friendship were two of the direct results of the affair. The trip was photographed from every angle by the Bureau of Public Roads and the Highway Commission. One movie, entitled "North Carolina Schools Pan-Americans in Road building" was shown in movie houses throughout the State. But the particular feature emphasized over and over again was the true hospitality evidenced in every hotel, diner, and highway shop the caravan visited. Tar Heels had little trouble introducing the friends from south of the Border to Variety Vacationland, 1924.

Fairways

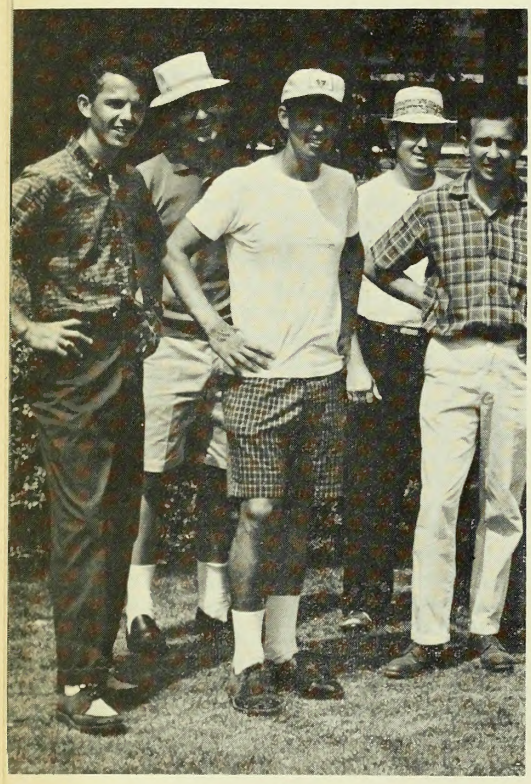
And

Right of Ways



Probably the most surprised fellow in the tournament was Ray Atkins when he was awarded "Champion Duffer" at the end of the award presentations on Sunday.

By SAM JACKSON, Reporter for Statewide Golf Tourney

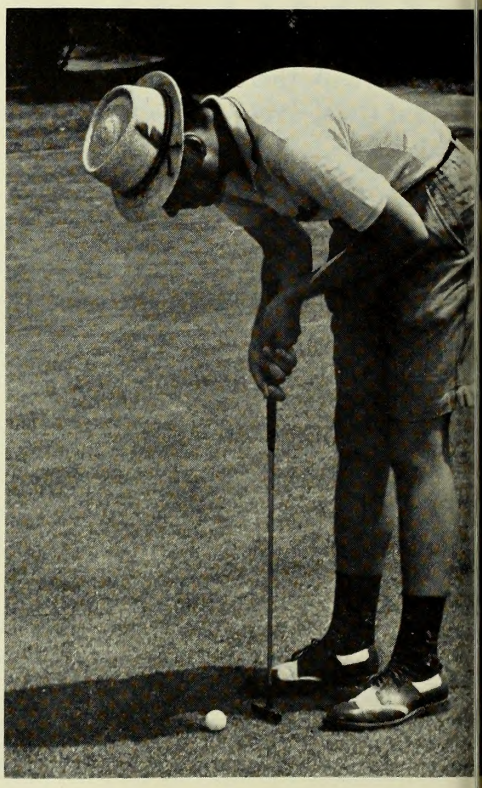


Personnel from the Raleigh office and the Division Offices from Wilmington to Asheville gathered in Raleigh where the Right of Way Department held its first annual state-wide golf tournament.

During the weekend of May 19 and 20, the Highway Commission's Right of Way Department held its first state-wide Golf Tournament. Golfers gathered at the Golf Association Club House in Raleigh on Saturday morning, May 19, and play got underway around 9 o'clock. The weather was fine, but lack of rain had made the fairways hard enough to have golf balls bouncing in every direction.

A banquet was held Saturday night at King of the Sea restaurant where wives and members of the day's foresomes got together. W. H. Webb, Jr., came by to say hello since he could not be present for the awards presentation the following day.

The Calloway System was used in determining final scores, and the winner of the championship flight was Bill Moon, and Warner Powell and Gene White tied for second place. Hilton Eades from Shelby won the second flight and Alan Wall from Albemarle won the second flight runner-up postion. Charlie Hartsock from the Raleigh Office won the third flight championship, and Cliff Carroll won runner-up position.



Bill Moon sank a 14' putt for his par on the 18th hole, and won the championship. As you can see, Moon has a putting style that is really all his own . . . ever see one like it before?

Excerpt From Hearing On Grandfather Mountain

The following was taken from a transcript of a hearing held in Raleigh on May 31.

Mr. Merrill Evans: The Commission will be in order. On May 14, we received a letter from Mr. Conrad Wirth, Director of National Park Service, and this is the letter in part. "It would be very much appreciated if the National Park Service could have an opportunity to appear before your Commission at its meeting which I understand is scheduled for May 31. At that time, I should like to present basic material with reference to the Blue Ridge Parkway route in the vicinity of Grandfather Mountain. A great deal of publicity has appeared in North Carolina papers regarding this road right of way, and we would like very much to have the opportunity to present our request for right of way to your Commission with supporting data to substantiate it." We wrote to Mr. Writh on May 14—this leading paragraph. "The Highway Commission will be glad to comply with your May 10 request for May 31 appearance with reference to the Blue Ridge Parkway route in the vicinity of Grandfather mountain." On that same date, May 14, we wrote to Mr. Hugh Morton. "We have had a request from Mr. Conrad Wirth that he be given an opportunity to appear before the Highway Commission on May 31 with reference to the Blue Ridge Parkway in the vicinity of Grandfather Mountain. We are writing to Mr. Wirth today complying with his request. The hour will be 1:30 P.M. The Highway Commission will be glad to have you with us on May 31, and you may be heard if you so desire." Mr. Morton answered on May 15. "Thanks very much for the invitation for me to be heard by the Highway Commission on May 31 when Mr. Wirth is slated to appear. I accept with pleasure." We recognize Mr. Wirth.

Mr. Conrad Wirth: We certainly are wired up here. I didn't really expect to get into quite as formal or extensive presentation as this, but on the other hand, I am glad that it is this way. First, I want to say this. I appreciate the opportunity. We have many things in common in North Carolina. People in North Carolina have been most helpful in developing the various National Park projects in the state. I know they have been of tremendous benefit to the Nation as a whole and as well as the State of North Carolina. I do want to mention those because it does give me an opportunity with all this wiring to be able to express to the people of North Carolina and to the Highway Commission, and I hope it gets to the other State Officials that we do appreciate their help.

In North Carolina, we have all parts of the Parkway under contract or funds to put it under contract with the exception of 11 miles. I think we have the right of way for all except this piece that we are talking about here now around Grandfather Mountain. If we are successful in getting the right of way for the Parkway which the State Highway has been very helpful on in getting, then we will complete the Blue Ridge Parkway in 1966 or 1967. I say that because we get our money through a contractural authorization of Congress, and we have it for the next year, and the bill going through for the two years following has money in it. The only possible way we can slip up is the fourth year. So, we feel quite pleased about it. It has been a long tedious job, but I think anyone who rides the Blue Ridge Parkway will report to it after they have ridden it as one of the finest drives certainly in America, if not, the world. Many fine photographs have been taken there all seasons of the year. It has a very fine alignment. It is one of the most beautiful drives in America, if not the world. With that as an introduction, I intend to make my presentation very objective. I have no ax to grind with anybody. I do not intend to make anything of a personal nature because those things don't enter. We can disagree. We have our very strong convictions and reasons why we need a certain right of way in order to keep up that standard. Those who are opposed to that location certainly are sincere and honest in their objections to it. We have made an honest search of our files to try to get a sequence to show just what happened. Some of the things I have to say may be taken adversely against us. In fact, they do, but those are the controversies you have as you proceed on a project of this kind. We are trying to put the whole thing into a very short statement here. It is longer than it should be, but I shall read it, and it has quotes from various letters to try to give you a sequence of events to bring us up to the present time; what different people thought of it, and the studies that were made from time to time in order to try to reach some sort of a satisfactory settlement of it. In fact this started before 1933, and I bring this in because the question has come up that we had the option to buy the property at one time and why didn't we buy it. In 1917, the Congress passed an act authorizing the Secretary, and this is an excerpt from it. "An act making appropriation for civil expenses of the Government for the fiscal year ending June 30, 1918 and for other purposes." To June 12, 1970—40 State 152. The Secretary of the Interior is authorized to accept for park purposes any land and rights of way including Grandfather Mountain near or adjacent to the government forest reserve in western North Carolina. That is a donation type of thing. We have no money to buy it and are not authorized to buy it. We would have accepted it then. I don't mind saying if it is given to us today, we will accept it today. The next thing appears that comes close to this is that the state wants to save the spruce along 221 — Yonahlassee Trail — and will trust the Parkway route will be flagged to prevent further reforestation. On May 4, 1936, Chairman Waynick of the N. C. Highway Commission to Associate Director Demaret. "We are interested in protecting spruce and other growth along the right of way to be sure to be used for the Blue Ridge Parkway across Grandfather Mountain. One suggestion that has been made is that the Parkway tie in with this section of the road. I am disturbed presently over the report that the owners of Grandfather Mountain are planning to sell the balsam and spruce rights along the trail, and I am wondering if it wouldn't be well to decide promptly how the Parkway is to run. Flag the route so that we can take possession of the property that we need to prevent further deforestation." In 1936, May 21, District Engineer Spellman to Mr. Waynick forwarded preliminary map prepared from the survey line of the Yonahlassee. "We have not flagged the Parkway line through this area. Ordinarily, I should hold these maps until our flagged is complete, but I am informed that your department has expressed the desire to have some information if only of a preliminary character about the project." On January 13, 1937, General Council Ross of N. C. Highway Commission to Mr. Demaret concerning the timber cutting along the Yonahlassee. "No way we can protect the timber outside the right of way. We very much wish that you would prevail upon the Federal Government to take this entire mountain as a national park. The state is not in a position to do it at this time." On October 3, 1938, Mr. Spellman to Mr. Demaret concerning flagging the location of Project 2G and 2H, Parkway said. "As far as Project 2H is concerned, at the time of our preliminary flagging some years ago, a proposed line was located on the hillside some what above the Yonahlassee Trail, a very good flag line was obtained with better alignment than the present road. Whether the existing Yonahlassee Trail should be used or whether the new location should be used is a matter that will require further study. The road is a forest highway, and undoubtedly is used and will be used by the Forest Service for sometime to come

in connection with their timber developments. The absorption of the present road by the Parkway, if it is to be accomplished, with the elimination of commercial traffic might be difficult. There is no other satisfactory location for the Parkway for Project 2H except at the present Yonahlassee Trail or to take the hillside above it." On April 29, 1939, Mr. Ross to Mr. Demaret advising the state was being urged to make immediate settlement with the Linville Improvement Company. "We did not want to make this settlement until we had definite assurance from you that this section of Yonahlassee Road would ultimately be required for the Blue Ridge Parkway. These people owned a toll road all the way from Blowing Rock to Linville, and in 1921 when the road was incorporated into the state highway system, unfortunately the road was not purchased, but taken under a 99 year lease with the provision that if it should ever be abandoned by the State Highway that it would revert to the original owners. We must extinguish that lease. We are acquiring from these same owners frontage from their property for a distance of five miles leaving them a large acreage residue on either side with no public road frontage. The tentative settlement we have made contemplates the establishment of four public road connections in order to serve the residue. May I request that you immediately write to us the letter suggested in our conversation calling on us to acquire the right of way and that you also expedite approval of the requested public road access. On May 12, 1939, Mr. Demaret to Mr. Ross advising that at their last meeting it was agreed that the Parkway location in the Blowing Rock Vicinity would have to be settled before the Service would be able to request the Yonahlassee Park location on 2H. "I do not feel that the Service can make any further comment regarding the location of 2H until the location of 2F and 2G in the vicinity of Blowing Rock are agreed upon." Then, there is a vacancy there. Mr. Demaret is no longer alive, so apparently there were some telephone conversations between May 12 and May 18 because on May 18, Mr. Demaret wrote to Chairman Dunlap of N. C. Highway Commission. "This letter confirms our understanding that the existing plans designate the right of way for section 2H, and acquisition by the state is requested on the basis of these plans." Then on May 27, 1939, Mr. Demaret signed by Mr. R. F. Leach to Mr. Dunlap in regard to how far the state would go in acquiring 3,500 to 4,500 acres of land on Grandfather Mountain to eliminate need for access to Linville 1mprovement lands, and if possible the possibility of development of Yonahlassee side of the mountain. On February 26, 1940, this last letter is May 27, 1939, Mr. Demaret to Mr. Ross signed a claim of Nello Teer against the Highway Commission for a quarry site on 2H. "Since the location of Yonahlassee Trail was tentatively adopted for section 2H several years ago, it is concluded that we should request the state officials to properly protect the land appropriated. The reason for appropriating the land for this section at that time was because it was understood that the adjoining owner was cutting out the timber and the land was appropriated in order to prohibit the continuing of the objectionable timber cutting. Inasmuch as the final location of section 2H has not yet been definitely determined, this letter should not be construed as approval of the route of the Yonahlassee Trail as being the location." On December 20, 1940, Resident Landscape Architect Abbott approved and forwarded Landscape Architect's report on the route through Grandfather Mountain to the Chief of Plans, Mr. Payne. The report states and I quote. "A little over a year ago, the state proposed that studies be made for relocation above the present road. There have been difficulties in eliminating the frontage rights along the present road which would be solved by taking the new location. Inasmuch as the state is willing to take topo and flag the line, it is recommended that they proceed with this after which it will be possible to make studies of the engineering estimates of new construction as compared with the improvement of the Yonahlassee Road." In 1946, October 21, Superintendent Weems to the Regional Director, Region 1 forwarded maps showing the two lines of Grandfather Mountain together with cost estimate and recommendations favoring the high line. On November 13, 1946, Acting Regional Director Cox to Mr. Spellman reviewed the two proposed locations through Grandfather Mountain for 2H and tabulations showing comparative costs and advice. "It is believed that the state authorities and the local interest would like to proceed with the acquisition of this section. Therefore, we would prefer to see a decision reached now, and recommend favoring the high line indicating in red on Mr. Miller's map." On December 3, 1946, Mr. Spellman, Regional Director Allen concurring in recommendation of the high line location, 2H, rather than the early proposed revamped Yonahlassee. Mr. Spellman, for those of you who don't know, is a Bureau of Public Roads' man. "I believe that this would be the best solution." And on April 23, 1948, Mr. Spellman to the State Highway Engineer, Baise, forwarding development plans 2H, Grandfather Mountain to Beacon Heights, Drawing No. etc., etc.; these plans are furnished for use of the acquisition of right of way. On January 10, 1949, Mr. Weems to the Chief Locating Engineer Browning. "In view of the current attitude of owners of Grandfather Mountain, it would appear that acquisition of this area is not possible at ths time nor is it in the very near future. Under these circumstances, I believe it would be advisable for the state to post the right of way maps across Grandfather Mountain at the earliest possible time. This right of way is included in the section 2H development maps which I believe have been furnished you." On January 11, 1949, Mr. Browning to Mr. Weems. "I agree with you that this should be done without delay and we will, therefore, make our arrangements to post the courthouse maps as soon as we can." On June 5, 1955, Ranger Gobel to Mr. Weems advised that the state has posted right of way maps on 2H in the county courthouse on May 22. On July 1, 1955, Mr. Spellman to Mr. Wirth advising of the contract for the test borings at the proposed site on project 2H had been stopped by Mr. Morton while attempting to take his machines up the mountain to the site. The test borings were being made so that the contract plans could be prepared. On July 18, 1955, Mr. Spellman to Mr. Wirth. "Under date of July 6, I was advised by Mr. Rogers of the N. C. Highway Commission to have the contractor remove his equipment from the property until arrangements could be made for the right of way. On July 21, 1955, Acting Chief Sutton, Division of Planning and Construction of the Park Service to Mr. Spellman said. A note to the main office, EODC, Eastern Office of Design and Construction. "Mr. Spellman has advised us of the talk with Mr. Rogers on July 19. Mr. Rogers has requested that the Bureau and this Service collaborate with the State Highway Department representing representatives in trying to find a lower location for section 2H across Grandfather Mountain, in view of the opposition which has developed recently on the present location. We advised Mr. Spellman that we though that the State, the Bureau and the Service had given full consideration to all locations across Grandfather Mountain and that the present line represents the best line which could be found. Nevertheless, we wish to cooperate as far as possible with the state of North Carolina and again review this location. On July 22, 1955, Mr. Cox of the Regional Office wrote the Director. "Superintendent Weems feels quite strongly, and I agree with him, that the National Park Service should stand its ground in this matter although there is no objection to discussing it with the North Carolina official. Certainly, for the proposal to follow route 221 along the Yonahlassee highway has been given consideration already and rejected." August 2, 1955—Weems to Park Service People, National Park Service, and Mr. Abnule, and Mr. Middleton of the Bureau of Public Roads, Mr. Rogers and Mr. Brown of the State Highway Commission met at Grandfather Mountain with Mr. Morton. Mr. Weems reported on the meeting in his memorandum of August 15, 1955 to the Director. "Mr. Morton said he did not like the present Parkway location across the middle of Grandfather Moun-

tain, that it would ruin the mountain and his business. He further stated that the Parkway should take over the existing 221 location and straighten out the alignment. Mr. Rogers advised that the state would not give up their highway so that was out. Mr. Morton then said the next best thing would be to stay as close to the present US 221 as possible, and that if he approved the location and the additional right of way did not exceed 50 acres, he would donate it. After much discussion, it was finally agreed that the Bureau of Public Roads would study the location closer to US 221. Mr. Middleton's office has now completed the projection on enlargement of US GS topos. The location is 250 ft. higher than the present 221, and horizontally varies from 300 ft. to a maximum of 1,200 ft. from the state highway. The two Roanoke offices, that is the design and the park office, are agreed that this is the lowest practical location across Grandfather Mountain but is undesirable. The added length crossing the range lower down where they are deeper would require more walls and structures, makes it practically or particularly objectionable. It is our suggestion that the state be advised of the study, and that the lower location is not acceptable to the Government. If it is necessary to make some concession, we might ease up on the right of way requirements in spots. Another possibility for consideration is the elimination of the tunnel. The objection to this is the added length. On August 25, Supervising Highway Engineer Middleton, Bureau of Public Roads, and Mr. Spellman also of the Bureau of Public Roads transmitted estimates and related information on the high and low lines of the location of 2H. High line length 5.95 miles across including tunnel lining throughout, $1,930,000. Low line length 7.2 miles cost $2,006,000. August 29, 1955, Mr. Vent to Mr. Spellman. "We believe that it would be advisable for you to send Mr. Rogers the combined Service and Bureau recommendations to hold to the tunnel location as shown on the right of way map which they have had for sometime. We do not believe that any change or reduction in the amount of right of way should be made. It appears that the tunnel location is much superior to the alternate lower location in many ways. In our opinion, the tunnel line will be much less noticeable from the scar standpoint. The maintenance standpoint likewise, a shorter line, will result in considerable savings in future years. On September 14, 1955, Mr. Spellman to Mr. Rogers. "Forward data from the Bureau from the Park Service's study comparing high or previously adopted location and the lower alternate line studies. There apparently is a great deal of misunderstanding concerning the high line or the location on which agreement was reached some years ago. The highest elevation reached by the high line is only about elevation 4,500 as compared with a high point elevation of 4,200 on the existing Yonahlassee Trail, and 4,415 on the so called low line. The high elevation of 4,500 on the previous adopted line is much lower than the high 5,940 for Grandfather Mountain, and 5,000 or greater elevation for the so called mile high bridge. The high line location previously approved lies about 1½ miles away in a horizontal distance from the high point of Grandfather Mountain and is approximately 1,400 ft. below the high point in elevation. The difference in maximum elevation of 300 ft. between the so-called high line and the Yonahlassee Trail is not likely to present any material difference in the ice and snow difficulties. After a review of the situation, I do not believe that we should give further consideration to the low or alternate line. I am advised that the National Park Service concurs in this view. Accordingly, I would suggest that the Highway Commission proceed with the acquisition of the right of way upon the location previously approved." That was Mr. Spellman's letter to the North Carolina Department. On December 1, 1955, Mr. Wirth to Mr. Graham. "As I promised you, I have given further consideration to the problem of the Blue Ridge Parkway location on Grandfather Mountain which you and Mr. Rogers discussed with members of my staff and me on November 17. After fully reviewing the pros and cons of both lines, I am unable to escape the conclusion that the higher line which includes the tunnel is much superior to and in the better public interest than the alternate proposal. While we appreciate the difficulties pertaining to the acquisition of this section, we cannot see our way clear to accept the location which we feel is inferior." The Asheville Citizen on April 12, 1957. The Highway Commission today, April 25, formally ended what was at one time a lively ruckus over the location of the Blue Ridge Parkway, in the Grandfather Mountain area. Will it deed it back to Morton and Clyde Boyd land which has ben acquired through condemnation. On April 26, 1957, that is the first we heard they had cancelled out the taking. On April 26, 1957, Mr. Weems to Governor Hodges. "Since returning to the office this afternoon, I have learned that Mr. Wirth had an opportunity to talk with you in Manteo yesterday about the question you had after reading the brief on Mission 66." (That is our program I was telling you about) On September 6, 1957, Mr. Weems to Mr. Browning. "We have very carefully studied your proposal of July 31 to revise the right of way of section 2H. We note that you are proposing a uniform 1,000 ft. width of right of way or approximately 125 acres to the mile. I am sure you realize that a uniform 1,000 ft. strip is impractical in this kind of country. It would be most difficult to mark and to administer." On July 21, 1958, Mr. Cox to the Director following the discussion of July 16 of the Grandfather Mountain Parkway location with Mr. Babcock and Governor Hodges. "I believe we should give very careful and thorough consideration to the Governor's proposal that the Parkway follow generally the line of the present state highway. The Governor agreed that if this location of the Parkway were acceptable, all state highway traffic would be re-routed." August 6, 1958, Mr. Wirth to Governor Hodges. "I am quite definite in my feeling that the intermediate road between the high level and the existing state highway would not be worth the money that would be necessary to construct it, and that it would do a tremendous amount of damage to the side of Grandfather mountain. It is so close to the lower road. We are giving consideration to the possibility of using the lower road than the upper road. Also, as to whether we should seek arbitration using outside disinterested parties." October 3, 1958, Governor Hodges to Mr. Wirth. "Have you come to any conclusion about the Parkway on Grandfather Mountain? It is my opinion that we can get a somewhat higher elevation offered by the owner than the one previously shown you. However, it will not be up to the one laid out with the tunnel, and will not include the tunnel. We still fervently hope that you will take the roadway and the right of way that we now own and work out this Parkway." On October 13, I wrote the Governor. "A scroll showing the improved alignment along the general route of 221 for proposed Parkway location is now being prepared in the field, and will be forwarded to my office shortly. I will want to reivew these field studies and recommendations before any decision is made on the matter." October 20, 1958. Mr. Weems to the Chief of our Design and Construction, enclosing prints of the study scroll, tentative project center line for US 221 and of Grandfather Mountain Project location 2H. "Studied line does serve to show how a line meeting Parkway engineering standards compared with the present Yonahlassee Trail. It is obvious that only a small portion of the existing road can be used regardless of where the line is placed, there will be still several elbows of the old road on the inside and outside of the curve that will be outside of the road. The study shows that it is possible to make a location of Parkway engineering standards along US 221. Our recommendation, however, is for the high line because it offers superior views, meets engineering and asthetic standards much better and does not have the old road scar of the roadside. If US 221 location is finally agreed to, we have told Mr. Babcock informally that we would require (1) elimination of all frontage rights along US 221 (2) closing US 221 at the right of way line at the northern or Blowing Rock side (3) relocation of

US Forest Service Road on the left to connect with the public road on the same side with grade separations on Beacon Heights in the vicinity of public access." On December 4, 1958, Mr. Weems to the director enclosed cost data prepared by the Bureau comparing the original line and the proposed to one location. On the basis of present information, there is no appreciable difference in cost, alignment, standards are comparable. US 221 is approximately 4,000 ft. longer, but it has slightly better grade conditions than the high line. From an engineering point of view, there is little to choose between the locations. From the landscape point of view, however, we feel that the high line is superior in every respect. We strongly recommend building on it." April 28, 1959, Mr. Wirth to the Governor. "Thank you for your note of April 14 concerning our recent discussion of Grandfather Mountain — Blue Ridge Parkway. You may be sure that I am giving this matter serious thought and I will write to you shortly and give you my suggestions." On June 5, 1959, I wrote the Governor. "Any changes in the route that might be made, that is, the high route would be minor in nature as far as the location in concerned. When we think that this is something that will be with us for a long time, I do not see how any of us could accept the location other than the tunnel route which we have been discussing. As to the width of right of way, we would be willing to forego any extensive right of way on the left side of the mountain, on the mountainside of the road. Other than that which is absolutely essential for easement and for construction provided however that reasonable easements be granted that would protect the Parkway from any damage to the proposed purpose for which it is built. Furthermore, we would not see our way clear to permit any access to the road except those in accordance with our established policy. As to parking areas on the down mountainside of the road, I would be very glad to sit down and discuss these locations or if we cannot reach an agreement on these sites to leave them out of the present plan. There is some question of complication btween our overlooks on the Parkway with other developments. People are using them instead of the private developments." On August 10, 1959. Governor Hodges to Wirth. "This refers to our previous correspondence in June about the Grandfather Mountain project. I have had this up with Morton and have talked with him once or twice since. There is nothing that can be done. He still says we can have either the original or second line right of way, but he will not agree to the other. Where do we go from here?" August 18, Wirth to the Governor. "I don't know what Morton meant by the regional line because the only line that we have submitted as regional is the one that we want mainly the top. I assume that he means the existing high right of way. The second line is the one above which is nothing at all. In any case, I will be perfectly frank, Governor, we are not interested in them. We have studied them carefully and have tried to be open minded on it, but I would rather not have anything at all than to take either the existing or the second line. I am perfectly willing to just forget about it at least for the present time." The Director met with Governor Sanford to discuss Grandfather Mountain right of way on January 24, 1962. Wirth to Govenor Sanford requesting a meeting to discuss the Grandfather Mountain right of way which was the outcome and finally ended up with the meeting here to be taken up with the Highway Department which is proper. Mr. Evans read my letter asking for the meeting. I realize I have taken a lot of your time in giving you the back history, but if you are to understand the back history and the real objective of trying to reach a solution is important, then I think you should have it.

I do honestly believe that the engineers who have looked over this alignment both Federal and State, do believe that the alignment we have is by far the best in order to maintain the standards and give us a good Parkway. I have talked a long time; perhaps too long, but I shall be glad, Mr. Chairman, to submit any—by the way, here is Craggy Dome. The Parkways goes right through there. You can see just a little bit of it there as far as the disturbance is concerned. We fit it into the contour; we do it on purpose. Thank you, very much.

Mr. Hugh Morton: Thank you very much Mr. Evans and thank you Members of the Highway Commission for staying over this long to hear this matter. It has been going on for so many years though we can take a few more minutes and maybe get something settled, we will be better off.

The only matter at issue today is a right of way for the Blue Ridge Parkway at Grandfather Mountain. That is all that the State Highway Commission is authorized by act of the General Assembly to acquire. The State Highway Commission has acquired that right of way, the full length of our Grandfather Mountain property for the full width of 125 acres per mile. The National Park Service would like for you to buy more or all of Grandfather Mountain if you could be coaxed into it, but a right of way that is authorized by law is, and will be, your only concern. If we can get the lights turned out here, I want to show you a few color slides. Yes, I do have copies of that; Bud Wilson, will you bring those up here for me, and let's give anyone a copy of that who wants it. The first section of the Blue Ridge Parkway to be built in North Carolina, in fact I am told that the first section of the Blue Ridge Parkway was completed on property sold by my family through the Linville Company and this is it right here. This is near Grandmother Mountain with Grandfather Mountain in the background. It looks like we are going to have the distinction of providing the first right of way and the last right of way to the Blue Ridge Parkway. This map, some of you have already received copies of it, is our Linville Company map. In the upper left, you will see the orange area which is already used for the Parkway construction for the length which I have shown you a picture of. That is four miles long and it averages a thousand feet wide. Bud, check the focus on that, will you please? The yellow part in the lower right is the part that we sold in 1939 and was supposed to have been used for the construction of the Parkway immediately after the war. The red part is what they are trying to take right now. The yellow part is the full width of 125 acres per mile. In other words, it is all that the law allows them to take. The red part is in excess of what the law allows them to take. Those of you who have travelled the Parkway are familiar with this scene which is in Avery County which is near Beacon Heights on the completed section of the Parkway, that my family has already sold with Grandfather Mountain in the background. We are proud that the area that we have already provided for the parkway is such a beautiful part of it. This is another part of the Parkway over near Flat Rock. This is also in the territory that we provided. In addition to what we have already provided that has been constructed, this is a part of the so-called low route or 1939 route, the route that Mr. Wirth said would be so inferior. Actually, it is a very beautiful road and the opportunties that it affords, if they take advantage of it, will make this the prettiest section of the entire parkway. I want you to look at this. This is a picture that I took last week. This is made with an ordinary lens. You see the pavement to the existing road, and the man standing on the cliff in the background. This is on the inferior so-called low route. They let the trees grow up around the road right much, and I had to have the man out there on the rock chop the trees out so we could take this picture. I hope the State doesn't mind my doing that to their right of way. Here is another picture taken with a longer lens from the same spot. The low route or so-called is actually the highest point on the whole Blue Ridge Parkway for its first 350 miles. The Parkway never reaches 3,000 ft. in Virginia and it doesn't reach 4,000 ft. in North Carolina again until it reaches Mt. Mitchell. Now, the whole low route

around Grandfather Mountain runs between 4,000 and 4,200 ft., so the low route is the high route with the highest point of the 350 miles of the Parkway. This is another shot taken from the identical same spot where the man was standing in the previous picture only it was taken in the fall instead of the spring. I don't think this is very inferior scenery, myself, and I hope you don't. Sorry this is so dark there, but this is another picture taken along the existing right of way that we have already sold. Not only do you have the opportunity to look out at the scenery in the distance and down in the valley but you get a chance to look at the mountain, and it is a very inspiring sight. There are many rock formations all along the road. Beautiful things. The Park Service has let them get painted up with initials in recent years. but we can get them off with paint remover. I know that is what we do up at our place sometimes. Mr. Wirth said it is inferior scenery, but actually, it is the best we have got in North Carolina. I wish he liked it better. This is on that right of way. This is some of that pretty timber that we were saving by selling that right of way back in 1939. It is beautiful. This is right on that right of way that they already have. The main trouble with the Yonahlassee Road is that there are a great number of curves. My grandfather built that road in 1889 and 92 and he built it as a stagecoach road connecting Linville with Blowing Rock. He didn't have the heavy road-building equipment that you have in these days and times, and yet, he built the whole road for $14,000 so you can tell there wasn't much rock that he had to go through at this elevation. All that the state has done since then is put some blacktop on top of my Granddaddy's stagecoach road, but I think with a very little trouble, they could straighten it out and make a very beautiful modern highway. We have gone right ahead with our development at Grandfather Mountain and in 1952 we built the mile high swinging bridge, and have done other things without giving any serious thought to the possibility that the Park Service could seal the rest of the mountain. Now, the floor to the mile high swinging bridge is at 5,305 ft. The high part of the high right of way, and this is where you had a little bit of sleight of hand before you awhile ago, the high part of the high right of way is 5,000 ft. They were talking, I suppose, about the floor of the roadbed being 4,600 or whatever they said it was, but the actual land that would be taken from us would be up to the 5,000 ft. elevation point. If there is not but 305 ft. difference in what they propose to take from us, and where our main feature of the mile high swinging bridge is, we think that is too close. We have done what we think is just as good a job as the National Park Service has in preserving the natural beauty of the mountains of North Carolina. This is along our road leading to the top of the mountain. Our steps are of native Grandfather Mountain stone. We have got rustic signs. We are trying to do the best job possible at Grandfather Mountain. We make quite a feature of the blooming dates of our flowers. This is the pink lady slipper which is in bloom right now. Just last week, I took this picture of the azalea in bloom. It blooms more profusely on Grandfather Mountain than on any other mountain in North Carolina. It really is a sight to see. We have 15 miles of hiking trails on Grandfather Mountain, and incidentally several of them would be bisected by this proposed high route. This one is the one to the Indian House Cave, and it is one of the popular spots of the hikers. When we built the road to the Mile High Swinging Bridge back in 1952 we extended our road a mile and out of that mile of road, we got 10,000 red rhododendrum plants which we put in a nursery and we are now using these plants to enhance the looks of our parking overlooks on the way up to the top of the mountain. These rhododendrum are in bloom right now, and will be in bloom for the next ten days. We set out about a thousand plant a year for the last four years. We are doing what we think is a good job and we don't want to be interrupted by anybody else. We have got 50 picnic tables, 20 outdoor grills and one of the finest camping areas in the whole eastern United States. We try to help the State of North Carolina as well as ourselves by the sponsorship of events. One of our events, the gathering of the Scottish clans has really been sucessful. We have had people to come from all over the world. The speaker there, the honored guest on this occasion is Sir Leslie Monroe. At the time of his visit he was the president of the United Nations. Our largest annual event of all is the singing on the mountain, and this year will be the 38th sing. We think it will be the biggest one of them all because Dr. Billy Graham is the principle speaker. Like I was telling you, many of the pictures used by the State of North Carolina to publicize the Parkway and other areas, I have taken in the past decade, this is one of them. Here are some more. This is the Blue Ridge Parkway up near Doughton Park. This is the Craggy Tunnel near Asheville. Back in 1955, all of a sudden and out of a clear blue sky, we found Federal roadbuilding equipment on Grandfather Mountain at a 5,000 ft. level. This is what Mr. Wirth was telling you about awhile ago that I chased off the mountain. This is an air compressor that was brought up there without our knowledge for use in drilling a tunnel. All of a sudden it appeared that the road right of way that we had sold them in 1939 was not sufficient and this right of way would be the beginning point for a new Federal encroachment. I don't see anything wrong with that road. I think it looks pretty, but they say that it is inferior, and they want more. The boy there in the red shirt is standing on Black Rock Cliff. Black Rock Cliff would be crossed by the high right of way line. The fact is everything that you see in that picture or very nearly everything you see in that picture is part of what they are proposing to take from us on Grandfather Mountain. Down at the right you see the road; that is the centerline of the existing right of way we sold them, but everything above that and everything in this picture they are trying to take. Black Rock Cliff is the location of the largest known cave on Grandfather Mountain. We have built a trail to it, and it is one of the high spots of the visitors — especially the hikers, they go out there, and if the line went through they would take Black Rock Cliff cave from us. This picture, I want you to look at real closely because there is no 3:1 exaggeration on this model here. This is the actual picture of the profile of Grandfather Mountain. Now, over on the left, you see Black Rock Cliffs. That is at 4,500 ft. elevation. The Parkway does not reach its highest point according to this proposed high line until it goes out of the picture to the right, it reaches 5,000 ft. there; in other words, the wilderness area that you see there in the picture would be bisected by a road that would make a pretty deep gash in the side of the mountain. All of you are familiar with the trend in highway building and in signing. You know that along your Interstate System, you have signs that inform the traveler of where the things he is looking for are. This is on Interstate 40 between Morganton and Hickory, and as a result of signs like this, we have got good motels and eating places pretty well located along the Interstate System which is limited access road, on state roads or local area, or whatever it may be, our sign system tells the public what they are looking for. This, of course, shows Cape Hatteras National seashore. At Grandfather Mountain for many years, we have had a sign at the intersection of US 221 and the Parkway that said Grandfather Mountain—1, also said Linville Summer Resort Garages—3. After all this hassle, all of a sudden, in 1958, this sign appear and this picture was taken just a month ago so that is the way it looks today. In other words, there is no mention of Grandfather Mountain, no mention of Linville being a summer resort and garages, and you can imagine a howl went up when this happened. The explanation that the Park Service gave was that it could not allow billboards on the Parkway, and Sam Weems, the superintendent of the Parkway personally delivered this picture to the Asheville Citizen. It is a picture taken on US 11 in Bristol representing what the travel leaders of North Carolina were trying to do to the Parkway. Take a look at

(Continued on page 13)

Visitor From "Down Under"

N. F. Hatcher, Highways Engineer from Australia, arrived June 14 in Raleigh for a three-day tour of roads and highways in the Raleigh-Durham area. This is part of an extensive nationwide tour Hatcher is taking, sponsored by the Australian government. He will be in the United States for three months and will inspect highway construction and maintenance in Georgia, South Carolina, Florida, Texas, California, Oregon, Washington, Illinois, Indiana and Ohio. Chief purpose of the tour is to study current highway engineering practices in the United States.

During his visit with the Highway Commission in Raleigh, Hatcher described his job as something of a combination between Assistant Chief Engineer of Construction and Maintenance. His office is located in Sidney, the capitol of New South Wales, one of the six Australian states, with a population of 2 million people. He mentioned two of the current projects now underway for the Australian government—a $7 million bridge over an arm of the Sidney Harbor; and a project of motor work construction linking the cities of Sidney and Newcastle, heart of industrial activity in the area. At present, the State of New South Wales has over a million registered vehicles.

Hatcher received his early education in England, and at one time was working for the Royal Australian Engineers, an organization similar to the U. S. Corps of Engineers.

While in Raleigh, Hatcher saw sections of the new Raleigh Belt-Line presently under construction; US 1 to Apex; US 70 between Garner and Cary; and portions of interstate in the Durham area. James Lacy, Division Engineer for the U. S. Bureau of Public Roads, assisted Hatcher is his tour and describing the procedures and practies of the construction projects included on the tour.

After the tour of the United States is complete, Hatcher will leave New York for England, France, West Germany and Spain as he begins a European tour. Before returning to Australia, he will attend the Fourth World Conference of the International Road Federation.

Hatcher commented on the "overwhelming" hospitality he has received since he arrived in the United States, and was in Raleigh only a few hours before he had received an invitation from a lady who is also Australian, who invited him to her home for dinner with her family. We thought this was a fine welcome for a friend from "Down Under" on his first visit to the United States and to North Carolina.

NASA COMMENDS HIGHWAY CONSTRUCTION

Chief Engineer C. W. Lee has received a letter from Harry J. Goett, Director of the National Aeronautics and Space Administration's Goddard Space Flight Center, in which he expresses the Space Center's appreciation for the cooperation they had received from the Highway Commission in the construction of the new bridge over the West Fork of the French B road River in Transylvania County.

A tracking station for several satellite programs in NASA's space exploration program is being constructed there. The construction of the bridge, according to Goett, was vital to the program because the bridge provides good access to the site and enabled on schedule construction.

Bag Limit

I just got a limit—had very good luck
But didn't shoot pheasant, a quail or a duck.
I got up quite early and traveled the by-ways—
You see, I'm the fiend who shoots road signs on highways.
My very first shot bagged a beautiful SLOW
And I chuckled with glee when I laid that sign low—
Than I sneaked through the grass and I hid among boulders
And knocked over a couple of tender SOFT SHOULDERS
I got three CITY LIMITS and one sign that read
In arresting black letters LOOK OUT! CURVES AHEAD!
Then I shuttered a STOP, but my prize shot no doubt
Was the one that demolished a DANGER! BRIDGE OUT!
It was strenuous work, but I've no cause to squawk
I'm a sharpshootin' champ with an eye like a hawk.
So if you get lost, or get killed, or pay fines,
You can thank me, Ol' Pal—I'm the fiend who shoots signs.

Aub Brandon in
HUNTING AND FISHING

"Round-up Time On I-40"

A tractor-trailer hauling cattle wrecked Tuesday night, May 30, on I-40 two miles east of the Burke County Line, blocking westbound traffic for an hour and 45 minutes, and freeing 24 head of cattle.

The rig was carrying a load of 15 bulls and 10 cows. The cattle began fighting and shifted the load back and forth in the trailer, causing the rig to go out of control. It overturned and crossed the median strip, completely blocking traffic in the west-bound lane. One of the animals was killed and the other 24 were roaming in an area between Dysartsville Road and Glen Alpine.

Questions And Answers On Retirement

Q. What is the normal waiting period before refunding a member's accumulated contribution? fundings a member's accumulated contribution?

A. Ninety days after date of separation from State service.

Q. What is the maximum retirement allowance that a member may receive?

A. There is no maximum allowance set forth by the Retirement Act. Each allowance is calculated separately.

Q. How are retirement benefits determined?

A. The retirement allowance of each member is calculated on the basis of a number of different factors. The calculations are submitted by an independent actuary who certifies the results of the calculations. These factors are:

a. Sex of retiring member. This is taken into consideration because women, on the average, live longer than men.

b. Type of work performed by employee. This is taken into consideration because statistics indicate that the length of life is higher in some occupations and lower in others.

c. The amount of service rendered to the State. This is taken into consideration because it is only fair to grant a higher retirement allowance to those who have rendered longer periods of service to the State.

d. Salary paid during service — This is used since there is a direct relationship between the amount of money an employee makes and the amount that he contributes to the Retirement System each pay period. Therefore, an employee with a larger average salary over the years will contribute more to the Retirement System and thus build up a larger annuity for himself.

e. Age of Beneficiary — Those employees who select Option 2 or 3 will have their monthly payments figured on their age and the age of their beneficiary.

Q. Is it possible for the same employee to receive a larger monthly allowance under a Disability Retirement Plan than he would under the regular service retirement at age sixty?

A. Yes! An employee on disability will receive an allowance which consists of:

1. An annuity which is the actuarial equivalent of his accumulated contributions at the time of retirement and (2) a pension equal to 75 per cent of the pension which he would have received had he remained in State service until age sixty-five without further change in salary.

   Therfore, due to this projection, an employee could have more money accredited to his account than the amount he would have received up to age sixty.

Q. If an employee selects his retirement option at age sixty, will he be allowed to change his option again before retiring?

A. No. However, if the employee's beneficiary dies, a new option can be selected.

Q. What are the most accepted ways of obtaining legalized proof of birth?

A. 1. Affadavit Form.

2. Service Discharge.

3. U. S. Census Bureau—If born prior to 1913 and no other proof of birth is available, an employee may write to the U. S. Census Bureau in Pittsburg, Kansas, enclosing $3.00 to cover the cost of the Census search. The following information should be included: name of parents, place of birth, and any additional information that may be of help.

4. Duplicate of Birth Certificate—This can be obtained from the North Carolina Department of Health. They have records on file from 1913 to present.

5. Delayed Birth Certificate—to obtain a Delayed Birth Certificate three statements of proof must be obtained. They must come from such sources as a school record, church record, employment record, statements by older brother, sister or other close relatives. Each statement must be notarized and submitted to the Register of Deeds for the county in which the employee resides.

N. C. S. H. P. E. A. Association News

VOLUME III-NUMBER 3 MAY, 1962

GROUP INSURANCE PROGRAM—accumulated statistics for seven months of the current policy year (10/1/61-4/30/62) are as follows:

CLASS	TOTAL PREMIUMS	TOTAL CLAIMS	DEATHS	% RETURN THIS YEAR	% RETURN LAST YEAR (7 mo.)
EMPLOYEE MEDICAL	$110,434.74	$130,616.48		118.27	127.74
EMPLOYEE A&S	135,496.39	130,881.48		96.59	101.89
DEPENDENT MEDICAL	265,086.23	184,750.81		69.69	70.52
EMPLOYEE D&D	35,207.29	29,500.00	6	83.79	93.14
EMPLOYEE LIFE	233,301,20	154,000.00	31	66.00	81.24
RETIRED LIFE	12,842,65	22,500.00	24	189.99	486.49
TOTAL LIFE	246,143.85	176,500.00	55	71.71	106.52
TOTAL	792,368.50	652,248.77		82.32	95.91

Life Coverages

(A) Active Employees		
(1) Month Lives Insured	6596	6726
(2) Month Liability	$30,299,143.00	$29,094,358.00
(3) Average Life Claim	4,967.00	4,789.00
(B) Retired Employees		
(1) Month Lives Insured	630	687
(2) Month Liability	$611,554.00	$2,101,996.00
(3) Average Life Claim	938.00	2,736.00

Guaranteed return to SHC employees is 92.5% of premiums paid, this return in actual claims, reserves, waivers, etc. The Carrier is guaranteed 7.5% of premiums for retention, of which 2.5% is paid to the State of North Carolina for gross premium tax, leaving a net to the Carrier of 5% of premiums paid. Any lesser return to us in claims under the 92.5% guarantee, means funds to go into the reserves acuarially needed and which were depleted last year; when reserves are sufficient, returns to us other than claims can mean waiver of premium, increased benefits at no additional cost, etc. The present trend, with the changes necessarily made last year, indicate we should be able to build the depleted reserves and then look to other benefits for the good of all. When the Carrier returns to us more than the guaranteed 92.5%, it depletes our reserves and also goes into the funds of the Carrier who has to pay the bills anyhow. When the reserves are completely depleted, as last year, and the Carrier returns more than the guarantee, adjustments are necessary as was the case.

PREMIUM COSTS, MONTHLY BASIS

Life	$1.10 per $1,000 per month (multiply by amount of your insurance)
A. D. & D.	.166 per $1,000 per month (multiply by amount of your insurance)
Medical Care:	.739 per $10.00 weekly (multiply by amount of your weekly insurance)
Employee	2.367 per Employee per month
Family	6.551 per Employee per month

(Note: A. D. & D. means Accidental Death and Dismemberment features—A. & S. means Accident and Sickness for weekly benefit payments when on insurance claim)

Example of A. D. & D. in above 7-months report: out of 55 deaths, 6 were accidental, meaning double life payments.

SELECTION OF RETIREMENT OPTION AT AGE 60—in the event that a member continues in service beyond age 60, he may select an option in order to provide a life income for his beneficiary if he should die prior to retirement. Such option will be in effect if the member is living 30 days after it is executed. Benefits will be paid under that option upon death of the member or upon his retirement. Thirty (30) days after it is executed it is binding on the member and the Retirement System unless the designated beneficiary dies prior to retirement of the member. (quoted directly from pamphlet furnished by Retirement System)

(Continued from page 9)

those billboards and then look at what was actually there—simple directional sign, and I ask you have they played it fair with us all the way through. I don't know. The State has gone beyond that section, and incidentally, put up this sign that says Grandfather Mountain—1. There was a lot of confusion on the part of the travelers. They could not understand where the turnoff was to Grandfather Mountain which is regardless of what anybody says a major travel objective. This sign you had to look back over your shoulder and straight ahead at the same time in order to drive and read the sign, but it was the best that could be done in the face of the Park Service in defiance of the State. There are plenty of gas, food, lodging signs on the Parkway, but these are only for the Government owned facilities. The private facilities that are off on the communities to either side of the Parkway, they are commercial, therefore, that is not good and there are no signs for them. There seems to be a master plan for the Parkway to put a chain of these government facilities all along the Parkway and keep them right on the Parkway so they don't have to get off into the communities on either side. In North Carolina, this master plan calls for these facilities to be put, they either have been put or will be put according to the plan, at Cumberland Knob, Doughton Park, Thompkins Knob, Linville Falls, Crabtree Meadows, Mt. Pisgah and Tennessee Bald. We have done pretty well at Grandfather Mountain in staying in business even in spite of some of these difficulties, and the Mile High Swinging Bridge and other facilities have helped us to do that. We have been severely criticized for having the Mile High Swinging Bridge by some of the Park Service people. They say it is a blot on the natural scenery, but when I think of this and you may wonder what it is, this is the Observation Tower that was put on top of Clingman's Dome. I don't know whether this is as bad a monstrosity as the Mile High Swinging Bridge or not. You may be interested in knowing, incidentally, about the Mile High Swinging Bridge; the guy who designed the Mile High Swinging Bridge Charles Hartman in Greensboro, the architect, he also designed this shield which is the trademark of the National Park Service throughout the country. He designed it first for the Guilford Battleground in Greensboro, but it was so popular that they adopted it for the whole National Park Service. We believe that the wilds, wilderness, rugged characteristics of Grandfather Mountain are the main things that we have to sell to our visitors, and if we have a super highway plowing right through the middle of it, it is going to change things a whole lot.

Thank you very much, and unless there are questions this will end my part of the program.

FORMER CHIEF ENGINEER DIES

Louis W. Payne, 72, a former assistant chief engineer of the State Highway Commission, died Wednesday, May 30, at Rex Hospital in Raleigh. He retired from the Commission in 1960 after 37 years' service.

He was a past president of the North Carolina Society of Engineers and a former president of the Raleigh Engineer's Club.

A native of Ashland, Pennsylvania, Payne studied engineering at the University of Virginia. He served in France during World War I as an officer in the 22nd Engineers Battalion.

Payne is survived by his wife, the former Virginia Connell Fredricksen of Raleigh, a son, Louis, Jr., a student at Davidson College; a stepdaughter, Mrs. John B. Stewart of Winston-Salem; three grandchildren, and one sister and one brother.

Employee Requests Safety Improvements

Truitt Johnson, Maintenance Yard Foreman in Harnett County, is an active citizen, good worker, and recently wrote his newspaper editor concerning safety conditions in his town.

Editor

The News:

This, I hope, will bring to the people of the town the fact that we are endangering the lives of many, many of our children as well as ourselves.

As you all know, there was a school bus accident, and also a car accident, the same day in our streets last week. The good Lord was with us because none of the children were hurt seriously. But this is not what I want to talk about.

I think it is time we did something about the way our street crossings are blinded by shrubbery, trees and other things. Are we going to sit around until someone is killed before we do something about this?

This also brings one other thing to mind. What if the streets had been filled with children walking to school, like I have seen many afternoons? We need a sidewalk from the school to downtown to keep the children out of the streets. Are we all so blind or do we not care enough for our children that we are willing to let one of them be killed and then do something. That is a very dear price to pay.

At one time I tried to get a sidewalk but due to a health problem I had to give up the work. But are all the rest of you asleep? Why not do something about these blind intersections and sidewalks. Children are too precious to pay for our carelessness.

Truitt Johnson
Lillington

RETIREMENT SYSTEM FUNDS INVESTED AS OF MARCH 31, 1962

CLASS OF SECURITY	$ AVERAGE YIELD	BOOK VALUE	$ TO TOTAL
County Bonds	3.18	$ 11,946,397	3.81
Municipal Bonds	3.19	12,404,427	3.96
U. S. Treasury Bonds	3.31	140,180,229	44.72
Corporate Bonds	4.53	120,426,554	38.42
U. S. Agency Bonds	4.52	23,377,945	7.46
Public Housing Authority Bonds	3.46	1,139,078	.36
Farmers' Home Administration Notes	4.32	2,465,481	.79
Total Bonds and Notes	3.87	$311,940,111	99.52
Common Stocks		1,507,113	.48
Grand Total		$313,447,224	100.00

Otis Banks, Secretary

HEADQUARTERS

By JEWEL ADCOCK

LEGAL—*Miss Virginia Lyon* recently resigned from the Legal Department to accept a position as secretary to Supreme Court Judge Susie Sharp. A highly efficient employee of the Commission for 15 years, Virginia will be missed by her many Highway friends. Southern seas beckoned *Shirley White* and her roommate, who sailed to Bermuda May 9-14, for a vacation they will long remember. Department Head *Harrison Lewis* traveled to Minneapolis, Minnesota to attend the National Seminar of the American Right of Way Association, May 21-25, where he delivered a speech entitled "Practical Use of Economic Studies in Right of Way Litigation."



Gloria Anderson was given a surprise shower by members of the Safety Department and friends on her last day of work before she took a summertime leave of absence. Gloria, who is secretary to Herb Hardy, decided to send one of the cutest thank you notes we've seen . . . a cake, decorated with the names of all who had attended and centered with a big "Thank You".

LANDSCAPE—*W. R. Phelps,* Area Landscape Engineer, took his wife to Florida to vacation the latter part of May.

RIGHT OF WAY—*Eleanor Brantley* and her sister are featured vocalists at the Black Steer every Thursday in June. *Bobby Heath* is mighty proud of the new addition to his family, a bouncing baby boy, named, of course, Bobby O'Dale, Jr. Farewell to *Barbara Amick* who recently resigned to join her husband at his new job in Milwaukee, Wisconsin. Another employee who will be missed is *Celia Truelove,* who left to join her Army husband in Atlanta, Georgia. *Martha Bailey* reports a fine week's vacation at the Biltmore Hotel in Morehead City. Wedding bells are scheduled to ring for *Jim Wheless* the latter part of July. *Harold Davis, John Fields, Brantly Murray, Jim Wheless, Collis Moore,* and *Harold Cameron* went to Morehead on a fishing trip and brought back an excellent catch of Blues and Mullet. Another trip is now in the mill for deep sea fishing in the Gulf. The Department held its first Annual Statewide Golf Tournament May 19 & 20 at the Raleigh Golf Association in Raleigh. Personnel from the Raleigh Office and the Division Offices throughout the State participated in the tournament. Most of the talking was confined to golfing and a good time was had by everyone. *Warner Powell, Bill Moon,* and *Gene White* were the three champions!

MAINTENANCE—CONGRATULATIONS to champion rose growers *Ethel* and Fred *Jones!* They entered two arrangements of roses at the Rose Show sponsored by Raleigh Rose Society and won ribbons on both arrangements.

EQUIPMENT—Congratulations to *Carolyn* and James *Fowler* of Apex upon the birth of twin boys! Ronald and Donald made their appearance on April 20 at Rex Hospital. Carolyn plans to return to work in Equipment in August. Welcome to *Mrs. Doris Boone Blaylock* of Durham, who joined the staff May 1. If employees of Equipment seem to be putting on weight, it is probably due to all the birthday cakes they've been eating. During the month of May, they celebrated birthdays for *Mrs. Lydia Kornegay, Dept. Head Layton Gunter* and *Mrs. Beatrice Harrison.* (And we hear—a unique custom is followed—each person having a birthday bakes his own cake—*even* the men). Our congratulations! Fellow workers missed *John Lambeth,* who was recently away from work due to a sprained ligament in his ankle.

FINANCE—Vacation is here and not a moment too soon . . . Seems most of the employees in Finance are ready for the sun. Acting Controller *E. T. Aiken* has been chief cook and bottle washer at his home during the past few weeks as a results of his wife's having to undergo surgery at Rex. Mrs. Aiken is home now and most welcome back. *Bertha Daniel's* husband, Jeter, who works in the Lab, also had a seige in Rex Hospital recently, but has returned home and is progressing nicely. *H. R. Pearce, Jr.,* and *Jean Hicks* recently had twin cases of strep throat infection. Welcome to *Paula Millar,* new member of Commercial Accounts. If it is true that good things come in small packages, Paula will be a real asset, as she measures all of four feet, ten inches and weighs in at slightly over 100 lbs. Paula replaces *Mary Satterwhite* who resigned for employment at Graybar Electric on the Boulevard. Employees report that with the pace so fast trying to get the Budget ready for another fiscal year, they are really thankful for luxuries such as air conditioning and IBM equipment.

BRIDGE—Our congratulation to Mary Anne Marchant, daughter of *Mr.* and Mrs. *G. S. Marchant,* who graduated "cum laude" with a Bachelor of Arts degree from Atlantic Christian College. She was editor of the "Pine Knot", the College Annual. *C. B. Patton* and his wife, Mary, are proud of new baby daughter, Mary Jane, born May 9. Trainees recently leaving the Department are *John Ledbetter, Harold Landrum* and *George Eason. Julius Blackmon,* a permanent employee, resigned to go into business for himself. *Bill Rogers* is a "return employee in the drafting room, having left temporarily to finish school. Attending the dedication ceremonies for the Lindsay Warren Bridge over Alligator River on May 10, were *Roland Noblin, L. C. Dillard, J. L. Norris* and his wife, Jessie Ruth. *Art Noble's* cottage at Nag's Head is much in demand by the boys in the drafting room. *Gerald Page* spent the week of May 20-26 there.

Carl Kiger and his wife, Linda, were there May 12-19. The big attraction through June is the fishing. Art and his wife, Dorothy, are there most of the time when they're not renting the cottage and claim up to now the biggest "fish story" of the season—a catch of 500?? Having claim to only a "fair catch" are *John Smith, Bob Ellis,* and *James Palmer* who camped out at Hatteras May 10 weekend. *Jim Wilder* says only that he went fishing at Morehead. *Mike Dawkins* and his wife had a "different" vacation, spending a week in Kansas City, Missouri watching the Big League Games, also vistiting a friend in St. Louis.

ROADWAY DESIGN—Summer employees are *Don R. Denton, Luther W. Gurkin, III,* and *Charles S. Heilig, Jr., Anna T. Roberts* and *Samuel I. Pridgen* are new permanent employees. Welcome to all of you. It's also nice to have *Willie L. Bullock,* who replaces *Randy Chandler.* Randy resigned in May and invites his Highway friends to come visit him at his clothing store in Cary. Good luck to *Robert M. Kirkpatrick* who moved to Charlotte, to *Richard D. Croom* who transferred to the State Health Dept. and to *Charles W. Readling* who went on two-years military leave. Congratulations to *William V. Young, Jr.,* and *Norman H. Willey,* June graduates from N. C. State College in Civil Engineering. *George Sakas* and family vacationed for a week in June at Topsail Beach. *John Birdsall's* wife and son boarded the Queen Mary on May 29 for a visit with her family in England. Two weeks summer camp at Fort Bragg beckons *John Taylor, Bob Walker* and *Raymond Crouse.*

PURCHASING—Sporting a new T-Bird, *Sara Gault* drove her friends *Linda Johnson, Marjorie Rose* and *Betty Pearce* to Carolina and Wrightsville Beaches on Memorial Day. *Kay* and Carl *Denton* went to Surf City the last weekend in May. *Joyce Thompson* is a new member of the force as temporary Typist I. The Department is so busy that many members have been working nights.

REPRODUCTION—*Earl Williams* is really enjoying his summer cottage at Bear Creek. Fellow workers are glad to have *William Roberts* in his new position as Reproduction Operator II. *Bobby Poole* journeyed to Alabama for a recent weekend. *Paul Pearson* has been nominated by the crew as "Fisherman of the Year". Wonder when the award ceremony will take place . . . For ripe, red tomatoes, see *Raymond Jones. Claude Sugg* and *William Roberts* went to Carolina Beach the 2nd weekend in June. No reports of fish caught were given.

PLANNING—*Clifford Chappell* is Research Assistant in Mr. Bevacqua's Office. *Jane Ressijac* is a new clerk-typist. And *Jerry Oliver* is Research Assistant in Mr. Jay's Office. Welcome to all of you. *Walter Wiley* spent a week in June in the mountains. *Marie Jones* spent the last week in May at Morehead City. Congratulations to *Jean Carlyle,* who is the proud mother of a baby girl, Ann Marie, born May 22. (Mapping section) *Don Wisenhuit* of Wayneswille is a summer employee from State College. James DeBerry transferred to the Lab. Good luck to Rowena Keith who transferred to the Equipment Shop.

PUBLIC RELATIONS—(*Jewel Adcock* will be surprised to see the following in here, but we knew she wouldn't include it in HEADQUARTERS news).

Two anniversaries were on schedule for Jewel during June. First of all, she and her husband Jim, drove up to Virginia Beach to celebrate their third wedding anniversary. Jewel was sporting a beautiful pearl ring Jim gave her, and was beaming when she came back—we wonder if it was the sun or Jim that caused that glow? Tuesday, June 12, Jewel received another anniversary present, but of a little different type. This year she received her 10 year service award pin. . . .congratulations on a job well-done!

DIVISION ONE

By ROY E. WEST

Division Correspondent

RECUPERATING after being a patient at Roanoke-Chowan Hospital is Mrs. Rudolph Doughtie, wife of *R. Doughtie,* Machine Operator 3 in District Two. Now that she's home, we all hope she will be feeling much better in the near future.

VISITING OUTSIDE GREENVILLE recently, the *Fleetwood Lillys* and two children went to visit their parents, the *R. E. Millers* of Gates. Miller is a right of Way Aide.

AHOSKIE Native, *Joseph Nichols* has recently joined the Equipment Department as a Mechanic.

HOME FOR THE SUMMER is Robert Carroll Vanderberry, Jr., son of *Nedra Vanderberry,* steno in the District 2 office. Robert is a student at the University of North Carolina.

CONDOLENCES to *C. Therrell Liverman* on the loss of his wife. He is Maintenance Foreman II in District II.

OBIE WILLIFORD is a patient at Veterans Hospital in Winston-Salem. He is a clerk in the Sign Department.

SYMPATHY is extended to the wife and family of Bridge Tender *E. T. Brickhouse,* who died May 3, 1962. Brickhouse had worked for the Commission for more than 11 years.

DIVISION TWO

By ROY D. FRANKS

Division Correspondent

VACATIONERS: Division Engineer *C. W. Snell, Jr.,* and his wife went to Florida; *Thelma Exum,* Secretary in the Division Office, vacationed for a week; *H. F. Burns, Jr.,* went to Florida; and *Rosa Peaden,* Secretary in the Appraisal Department, vacationed for a week in May.

NEW YORK is the destination for a group of seniors from Junius H. Rose High School. *Leland* and *Ada Briley*

are going to chaperone the group—*Briley* is an employee with the Equipment Department.



TWIN GRANDDAUGHTERS are enough to make any Grandad mighty proud. Hilton Gray Gurganus and his wife find dinner time means close cooperation when Dorla Gail and Christine decide they're hungry!

WELCOME to the following new employees: *W. C. Hendrix, Jr.; O. F. Broadway; C. L. Thomas, Jr.; R. L. Kennedy; J. W. Stocks; Wallace Chandler; Janice Horton;* and *Edward P. Latham.*

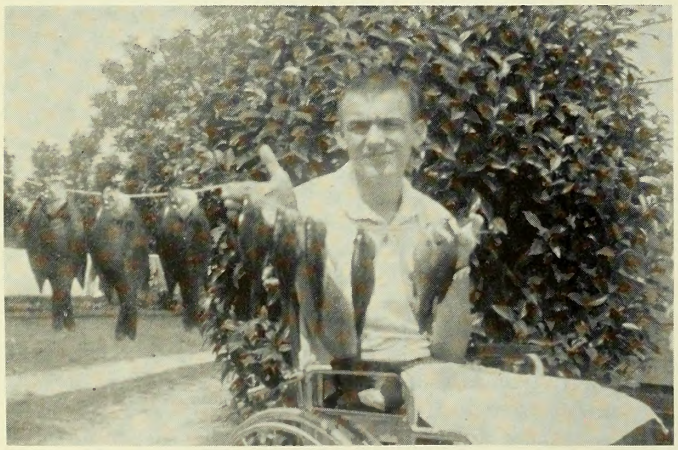
STORK NEWS: *Mr.* and Mrs. *John A. Belangia* announce the birth of an 8 lbs. 11½oz. son on April 1. *Belangia* is an Engineering Aide II in the Construction Department at New Bern.

DIVISION THREE

By IRENE HEWETT

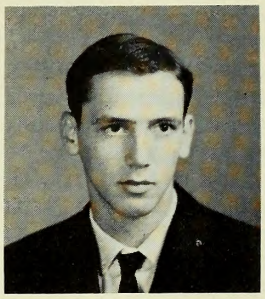
Division Correspondent

WE THINK J. S. GALE, Jr., whose father works with the Maintenance Department in Clinton, deserves much credit for continuing his studies at home after his accident June 16, 1961 which left him paralyzed from the chest down. He continued his studies through an intercommunicating school-to-home system installed by the Carolina Telephone and Telegraph Company. This equipment consisted of an amphlifier and speaker installed in the boy's home, and another in the classroom of Clinton High School. By flicking a switch, J. S. can tune in on his classes, ask and answer questions, and listen to discussions by classmates and the teacher. He has completed his work satisfactorily and graduates with the rest of his class the first of June.



J. S. GALE, JR. is a son any father and mother in America would be mighty proud of, especially during this year's high school graduation. For details, see Division Three news.

VISITING HIS PARENTS recently was Billy Cooper, son of Resident Engineer *W. C. Cooper.* Billy is in the Air Force and is stationed in Texas.



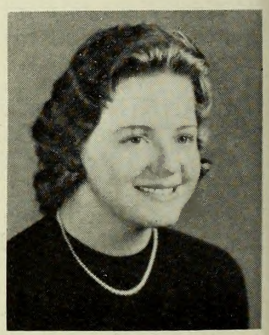
JOHN HOWARD, son of the W. R. Howards, graduated from New Hanover High School in June. He plans to enter Wilmington College this fall and will major in Mechanical Engineering. His father is District I Sub-shop Foreman in the Equipment Department.

OUR SYMPATHY is extended to the following: *Mrs. Margaret Grotgen,* Steno in the Equipment Department, whose father, Jesse Eason of Gainsville, Florida died on May 7; *Leon F. Barefoot* of the Equipment Department who lost his daughter, Sharr Diane, on May 7; and *Tony Hewett,* Maintenance Yard Foreman, who recently lost his father. These employees have asked that we express their appreciation for the kindness their fellow employees have shown them in their loss.

CONGRATULATIONS to *Mr.* and *Mrs. William Gurganus* on the birth of a daughter. They have several boys but this is the first daughter and they are quite proud of her. Gurganus is a Bridge Tender in District 1. Also, *Mr.* and *Mrs. Thomas D. King* are proud parents of a daughter, Jennifer Devone, born April 30. King is employed as a Highway Engineer II with the Maintenance Department in Sampson County.

WINNER OF COLLEGE SCHOLARSHIP

MARY FRANCES GROTGEN, daughter of Mr. and Mrs. J. F. Grotgen, graduated this June from New Hanover High School in Wilmington. She held several school and class offices, and has long been active in church work at Sunset Park Methodist Church. This year she was granted a Future Teachers of America Scholarship and plans to enter East Carolina College this fall and will work towards a degree in Grammar Education. Her mother is Margaret E. Grotgen, Stenographer in the Division Three Equipment Department.



THE WELCOME MAT IS OUT for *A. E. Grimmer,* Clerk 2, and *J. R. Robinson,* Highway Engineer I, who have joined the District One Office in Burgaw. Also we

welcome *Stephen Brock*, Engineering Aide 2, back to the Construction Department. Stephen has previously worked with the Construction Department. Right of Way has some new personnel: *J. Thomas Davis* hails from Pink Hill, and *Marvin Tew* from Clinton, N. C. Tew spent a couple of days at the State Golf Tournament in Raleigh, May 19 & 20.

DISTRICT TWO employee, *Henry Harvell*, has resigned to accept other employment.

DIVISION FOUR

By JERRY BOYKIN

Division Correspondent

IT'S NEVER TOO LATE to have childhood diseases. Two members of the Right of Way Department have recently been home with MUMPS!

AFTER 20 YEARS of continuous service, *Clyde W. Little*, Machine Operator, of Weldon, is retiring from the Highway Commission. His fellow workers wish for him happiness and good health in his retirement.

GET WELL WISHES TO: *Joe Neal* who underwent surgery; *"Pete" Harlow*, a surgical patient at Warren General Hospital in Warrenton; Mrs. Irene Harlow, wife of *A. C. Harlow* of Enfield; *Joe Lovegrove*, a former employee and brother of Mrs. Harry L. Light, who was hospitalized at Scotland Neck.

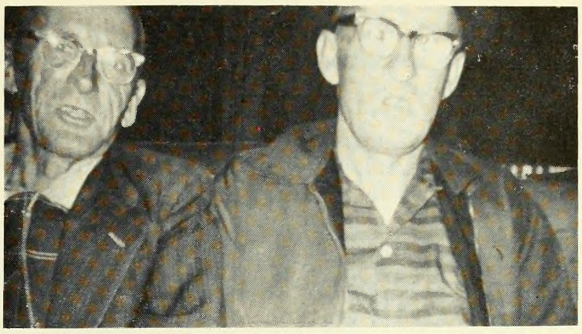
ON THE JOB after a recent illness is *J. C. Keel* of Tarbor. Welcome back!



MISS TWISTER

"TWISTIN'" is loads of fun for Barbara Jean Light, granddaughter of Harry L. Light, Maintenance Supervisor of Enfield.

SINCERE SYMPATHY to *Mr.* and *Mrs. John P. Upton* of Scotland Neck in the death of Mrs. Upton's mother; and to *Jesse C. Parker* of Enfield upon the death of his wife, Dorothy Melton Parker.



ENNIS BOYKINS AND CHESTER PAGE, employees of the Division Grading crew, participated in the clean-up operations at Nags Head after the Good Friday storm on March 7.

NEW EMPLOYEE, *Mrs. Margaret R. Barefoot*, a new clerk in the Road Oil Department, is a welcome addition. So glad to have you with us—welcome to the headache club!

DIVISION FIVE

By PEGGY BRIGHT

Division Correspondent

EVERYONE WAS DELIGHTED to see *J. W. Jenkins*, former Division Engineer, when he visited the office. He says that now he has found time to catch up on his golf since his retirement.

SEEN IN THE PARKING LOT: One "baby blue" car belonging to *Hilda Harris*, Secretary in the District Two office. Latest report indicates that it is brand new!

A MUSIC BAND has been formed by the Highway Maintenance Department. with *H. G. Wheeler* as master of ceremonies. If anyone wishes to contact the group to play dances, contact Mr. Wheeler.

ON VACATION were *G. J. Brogden; L. W. Clay; W. L. Reams; W. R. Rutledge; M. D. Seat; R. A. Mathews; Giles Crutcher* and *Alvin Laws* who went to Kerr Lake on a fishing trip; *G. S. Bailey; W. B. Grady; S. H. Averette; L. L. Reece* and *M. D. Seat.*

SYMPATHY is extended to these Division Five employees: *L. W. Clay* in the recent death of his father; *Cloyce Alford*, Division Office and J. B. Alford, District Three, on the recent death of their grandmother, Mrs. Bettie Alford of Pilot.

GET WELL WISHES go out to *Frank D. Holding*, Construction; *Shanks Bradsher*—a victim of "mumps"; and *E. B. Critcher.*

DIVISION SIX

By W. S. KING

Division Correspondent

DISTRICT ENGINEER *SAM WILSON* is still trying to find the road in Bladen County that was described to him by a member of the Locating Department, Frank Bain, as the road where a woman lives in a brick house and has two good-looking daughters that work in the fields in bathing suits. We wonder how long it will take Frank and his boys to complete this location?



CHILDREN OF G. C. CHADWICK are planning a big summer, and we think Poppa is going to have his hands full. Left to right: J. C. Jr.; Debra Faye; Jo Ann; and Dennis Robert.

MAINTENANCE FOREMAN and *Mrs. W. P. Holland* have been vacationing in Mississippi recently. They have been visiting his daughter. It will probably take a few days to get that "Mississippi Mud" from between his toes.

WEDDING BELLS rang out for *John Roy Johnson* and *Janice Babbs* who were married on May 7. John is employed with the Prison Department in Raleigh, and his father is employed with the Maintenance Department in Cumberland County.

BABY NEWS: Congratulations to *Mr. and Mrs. Howard Beam* upon the arrival of a baby girl; *Mr.* and *Mrs. D. L. Cooper* who are new parents of a baby boy; and *Mr.* and *Mrs. W. C. Melvin* who announce the birth of a daughter, Rose Marie, born May 23.

FUTURE CIVILIANS *Rayvon Autry* and *W. J. Faircloth* will soon be back at work. Look forward to seeing them sometime in August.

SYMPATHY is extended to the family of *M. W. Bass*. Before retiring on April 1, 1962, Bass worked as a Maintenance Foreman in Cumberland County. Also deepest regrets are extended to *H. L. Britt*, Right of Way agent, in the recent death of his father.

VACATIONERS AND SUMMERTIME seem to go together. Visiting in Texas recenty were *Mr.* and *Mrs. J. L. Nance* who went out to see their son and his family. Division Right of Way agent *S. J. Smitherman* went down on the coast for a few days to do some fishing.

GET WELL WISHES to *A. L. Ford, J. F. Gray* and *W. J. Barker* with the Maintenance Department in Cumberland County.

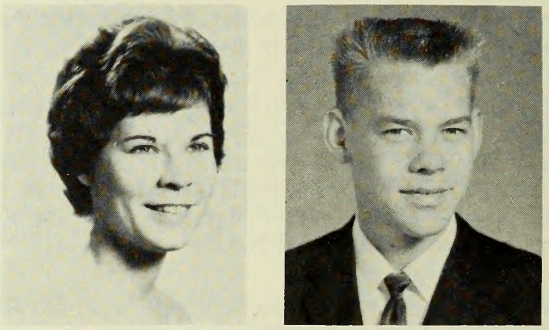
DIVISION EIGHT

By VIRGINIA WILLIAMSON

Division Correspondent

RECENT VISITS FROM THE STORK left a baby boy to *Mr.* and *Mrs. Roscoe Baxley*, District 2. Baby girls arrived in two Right of Way Department homes—the *Jack Bowmans* and *Johnnie Jonses*. The *Warren Hawks*, District 3, are proud parents of a boy. *June* and *Catherine Tillam*, District 1, are announcing a new arrival at their house.

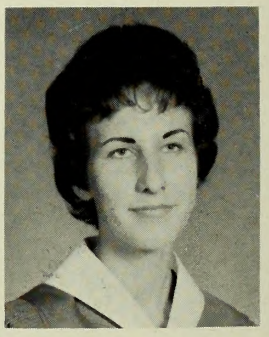
JUNE GRADUATES: Bill Tulloch, son of Mr. and *Mrs. John Tulloch*, Dental School, University of North



MR. AND MRS. J. VAN CAMPBELL are justly proud of their son and daughter. Ruby has received her B. S. degree from High Point College, and Barney graduated from Silk Hope High School. Their father, Machine Operator 3 with the Maintenance Department, has been with the Highway Commission for 15 years.

Carolina; Linda Edwards, daughter of Mr. and *Mrs. Wilbur Edwards*, Aberdeen High School, who has won a music scholarship to Brevard College.

WINS MUSIC SCHOLARSHIP



LINDA EDWARDS, daughter of the Wilbur Edwards, graduated from Aberdeen High School. Her mother, who is a secretary in the Right of Way Department, told us that Linda has won a scholarship in music to Brevard College.

WE WISH A SPEEDY RECOVERY to Prison Supervisor *Major Jackson*, who now has his leg in a cast due to a recent fall. Also we are sending get well wishes to the wife of *E. T. Brame*, Resident Engineer at Sanford. Mrs. Brame has been in the Lee County Hospital and will be in the hospital at Chapel Hill.

FRIENDS WERE SADDENED to hear that *Lee Wicker*, retired employee who lived in Sanford, passed away recently.

DIVISION NINE

By R. B. FITZGERALD

Division Correspondent

WE HEAR REPORTS of good fishing at Topsail Island from *J. H. Graham* and *J. D. Schenk*, employees in the Maintenance Department in Rowan County.

GET WELL WISHES go out to *C. J. Holshouser*, Truck Driver in the Rowan County Maintenance Department, who recently underwent surgery.

BEST WISHES for a long and happy retirement to *A. V. Safrit*, Machine Operator, Rowan County Maintenance Department; and *C. M. Stamey*, Truck Driver, Davidson County Maintenance Department. These two employees retired, effective May 1, 1962.

THE HIGHWAY EMPLOYEES ASSOCIATION, Rowan County Chapter, met on May 4 and elected the following officers for the coming year: *C. A. Kluttz, Jr.*, Chairman; *C. L. Nesbit*, Vice-Chairman; and *E. J. Lewis, Jr.*, Secretary and Treasurer. The Rowan Chapter reports 100% membership in all departments.

WELCOME to *R. D. Nail* who joined the District 2 Maintenance Department as Maintenance Yard Foreman for Davie County.

BACK ON THE JOB after an illness of several months is *L. C. Wright*, Maintenance Foreman I, Forsyth County. *C. F. Williams*, Maintenance Foreman II, Davie County, also is back at work after a period of illness.

OUR DEEPEST SYMPATHY to the family of *Cero Smith*, Machine Operator III, Stokes County, who passed away suddenly on April 23. Smith was employed with the Highway Commission for almost 20 years.

JUNE BRIDE *Alice (Watson) Greene*, who was secretary to Herman Shaw, planned a honeymoon to the West Coast. She and her husband, Bobby H. Greene who is the Assistant Principal in the Winston-Salem schools, were married on June 16, and left for a trip which included a visit to the World's Fair in Seattle Washington.

A BARBECUE SUPPER in Winston-Salem was held for members of the Association on Friday, May 18. *Jim Clontz, Jim Rumley, Don Cox* and *Herman Shaw* were on hand to sample the food and talk.

RECUPERATING is *C. E. Sain*, Maintenance Foreman II, Davie County.

NEW EMPLOYEE, *Bob Shore, Jr.*, is the new employee in the Appraisal Department. He was transferred from our North Wilkesboro Office as Negotiator.

IN GREENSBORO to attend a study seminar of the American Institute of Real Estate Appraisers, Chapter 40, were *Jim Clontz* and *Bob Young*. The meeting was a one-day affair and was held on May 23.

DIVISION TEN

By CURTIS E. COLLIER

Division Correspondent

GET WELL FELLOWS — *J. N. Wall, A. J. Linker* and *G. C. Warner* are on the sick list.

CONGRATULATIONS are in hand for *J. P. "Shorty" Hill* on his recent promotion. You are doing a fine job, Shorty!

IN WADESBORO, a group of well-known Tar Heels met to discuss plans for markers to honor Dr. Hugh Bennett and the Brown Creek Soil Conservation District.



WEDDING BELLS rang out for Anita Louise Buchanan and Louis Helms, Jr. Vows were spoken at the Allen Street Baptist Church at 7:30 P.M., Saturday, May 26. The bride is the daughter of Mr. and Mrs. A. M. Buchanan.

They plan a granite marker on the first farm to practice soil conservation and a bronze highway marker honoring Dr. Hugh Bennett, founder of the service. Among those attending the meeting were: R. W. Iobst of the State Department of Archives and History; J. M. Liles, longtime leader of the Brown Creek District; H. P. Taylor, former Lt. Governor; Phil Robinson, soil conservationist; L. C. Springer, Anson County Commissioner; Bryce Younts of the Soil Conservation Service; *C. R. Smith*, District Highway Engineer; *John H. White, Jr.*, Anson County Highway Engineer; and Don Huffman of Lilesville.

DIVISION ELEVEN

By DELORES ROGERS

Division Correspondent

WELCOME TO NEW EMPLOYEES! We're glad to have the following join the Highway Commission — *Peggy Ellis; Betty Foster, Valna Jones; Kermit Conner, Willie Winstead; C. C. Brown; J. W. Finney; C. B. Byrd; Levi Hodges; J. O. Stanley;* and *P. A. Wooten.*

WE WERE SADDENED to learn of the death of *R. O. Bumgarner*, Maintenance Foreman 4 in Caldwell County, District 2. Bumgarner, who died May 17, had been with the Highway Commission for 34 years.

VETERAN'S PARK in Mount Airy was the scene of a picnic for members of the Construction Department who got together on May 6.

SOUTHERN PINES played host to the First Annual National Elks Golf Tournament on May 18 thru 20. *Penny Hollingsworth,* Highway Engineer II in the Construction Department, played in the second flight.

PROUD PARENTS of a baby boy are *Mr.* and *Mrs. T. W. Hayes* whose son Mickey was born April 12. Hayes is an Engineering Aide I in the Construction Department.

BACK AT WORK after recent illnesses are *J. P. Bray; H. F. Davis; J. F. Hanes; W. A. Moser;* and *E. L. Phillips.*

GET WELL WISHES go out to *A. S. Haney* who is on extended sick leave.

TRI-COUNTY CHAPTER members of the Employee's Association held an annual business meeting along with a barbecue chicken dinner for the members and families on June 1 at the Elkin Shop.

SYMPATHY is extended to *E. L. Phillips,* Maintenance Department, whose father recently passed away.

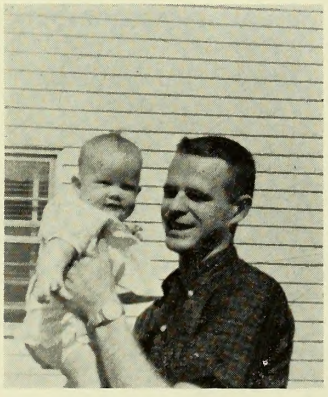
(NOTE: We're glad to have DELORES ROGERS join the staff of ROADWAYS as Correspondent for Division Eleven, and hope everyone will give her the fullest cooperation in getting news in—welcome to the bi-monthly headache club! Also, we wish to thank CORA LEE GREER, former Correspondent, who was recently transferred to Banner Elk, for a job well done! —A. Catlette, Assoc. Ed., ROADWAYS)

DIVISION TWELVE

By JEAN CLINE

Division Correspondent

THE BIGGEST NEWS in Division Engineer *W. W. Wyke's* family is the birth of twin granddaughters, Carol Elizabeth and Kathryn Ann, born May 22 to Mr. and Mrs. Tom Wyke, who reside in Pittsburgh, Pennsylvania.



INTRODUCING Wendy Corpening, 4½ month old daughter of Alex Corpening of Cleveland, Ohio. "Without a doubt, the finest baby yet" says her grandad, District Engineer P. J. Corpening of Statesville.

SHELBY CONSTRUCTION OFFICE employees recently enjoyed a steak supper near Charlotte. Resident Engineer *W. H. Manley's* group invited several friends to join them and the crowd included *A. T. O'Berry,* Materials Engineer *C. N. Snipes,* Highway Engineer II of Concord, and *Tom V. Staton,* Highway Inspector of Charlotte. Special guests included Division Engineer *W. W. Wyke,* State Construction Engineer *John H. Davis;* and Area Construction Engineer *R. J. Albert.*



TWO YOUNG LADIES were out strolling the other day, and from the way they are dressed, we'd judge they had just come back from Dior's! Karol Mauney, left, is the daughter of the Dale Mauneys—Dad works in the Equipment Department. On the right is Amy Cline, daughter of the A. B. Clines. Amy's mother, Jean, doesn't know we're going to put this in, but we are still wondering how she can manage a family, her household, a job, and still be such a good correspondent for ROADWAYS.

ANNOUNCEMENT is made of the marriage of *Nancy Dianne Philbeck,* daughter of *Mr.* and *Mrs. Claude Philbeck,* to Thomas Watchel Hill. The marriage took place on March 31.

TAR HEEL ARCHERY TOURNAMENT enthusiast *Ralph McCarter* of the Shelby Construction Residency, was knocking over the competition at the tourney's meet in Shelby in April. He won first place and local Archery star in the freestyle division and took home the field day trophy. Congratulations!

SYMPATHY is extended to *B. W. Bradshaw* and *R. L. Bradshaw* of the Road Oil Department in the death of their father.

NEW ARRIVAL—Kim Denise Sprinkle, born March 11, to *Mr.* and *Mrs. James D. Sprinkle,* weighed in at 9 pounds. Kim's father is a construction employee in the Statesville residency.

EARLY VACATIONERS are *Mr.* and *Mrs. Ed Coles* and daughter, Mary Frances, who spent a weekend at Carolina Beach and visited the USS NORTH CAROLINA. *J. L. Stikeleather* of Iredell reports a good trip to Florida.

NEW CAR OWNERS in Iredell are *Speedster R. L. Guy; Chargin' Claude L. Allen;* and *Whizzin' W. A. Ireland.*

WELCOME to *Melvin Hefner; Guy Barnes; W. H. Jenkins; D. L. Leatherman, Howard E. Marlow; Hugh Gene Pennell* and *Woodrow Guy* of the District 2 Maintenance. We're also glad to have *J. G. Barker; S. D. Black, Obediah Carswell, Jr.; S. F. Durbin* and *L. F. White.*

SHELBY'S EQUIPMENT DEPARTMENT is glad to have *Don Allen* and *Joe T. Barrett.*

FISH FRYERS in Statesville enjoyed a seafood dinner on May 18 at Howard's Fish Camp at Statesville.

OKLAHOMA BOUND vacationers this year are *C. C. Mauney* and his family who are heading for the town of Perry.

DIVISION FOURTEEN

By D. V. RAXTER

Division Correspondent

A TWO WEEKS' VACATION meant a lot of travelling for *P. H. Coffey*, Machine Operator 3 in Haywood County. He recently returned from trips to Cincinnati, Ohio, and several places in Virginia.

IN POLK COUNTY, *R. B. Hall*, Maintenance Foreman 2 retired on April 6. Hall went to work with the Highway Commission as a truck driver in 1942. In 1950 he was promoted to a foreman and was made a Maintenance Foreman 2 in 1958.

IN VIRGINIA last month, *Betty Ann Dukes* vacationed and visited relatives. Betty is Clerk II in the Hendersonville District Office.

SYMPATHY is extended to the family of *Grover L. Davis* who passed away in May. Davis retired from the Highway Commission in 1960.

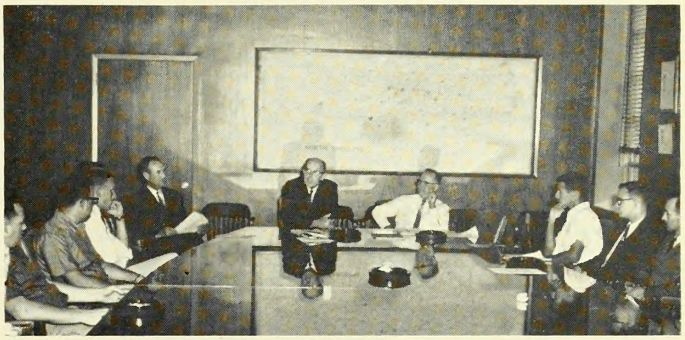
EMPLOYEE KILLED DURING CONSTRUCTION

A workman helping stake out a line for a fence along I-40 was killed on May 18 when struck by a passing auto. The accident occurred about three miles east of Old Fort in the east-bound lane of the super highway.

The victim, a temporary employee of the Highway Commission, was identified as James Edward Cannon, 23, of Kings Mountain. At the time of the accident, Cannon was stooping at the edge of the road holding a measuring tape when he was struck. Several crews were working along the same section of road, and a 35 mile per hour speed limit was in effect. Two men working near the scene of the accident were reported to say that the car which struck Cannon was traveling in excess of the limit.

STUDENTS MEET FOR ORIENTATION PROGRAM

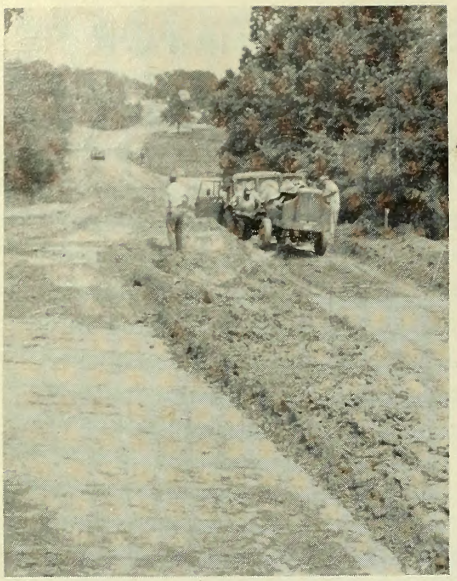
State College graduates recently attended a three day orientation program sponsored by the Personnel Department of the Highway Commission and several departments of the Commission located in Raleigh. Twenty students, all of whom received a BS degree, were introduced to highway operations through a series of lectures, assemblies, and discussion groups.



The first day, an assembly was held in the Commission Room and Withers Davis, Personnel Officer for the Highway, welcomed the group. A discussion followed, touching on certain aspects of employment such as opportunity, security and profession. Throughout the three day period, various department heads talked to the students—some of these departments participating were: Accounting; Construction; Legal; Safety; Equipment; Insurance; Maintenance; Landscape; Purchasing; and Chief Engineer. Talks were given by Assistant Chief Engineers Hardesty, Irving, Winslow and McGowan. On the last day, a visit was made to the State Personnel Department for a briefing by Director Ed Lanier.

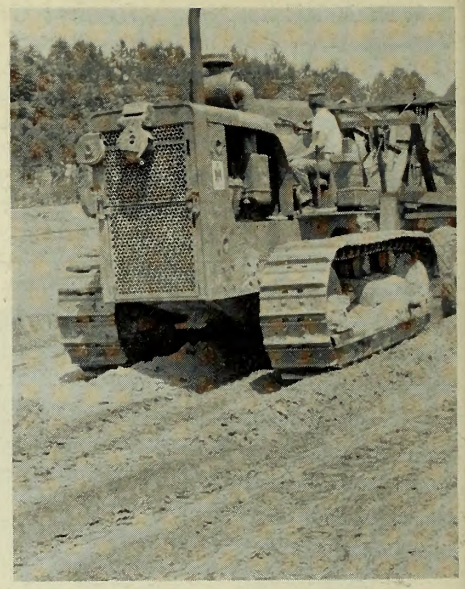
The round-table discussion groups were acknowledged as a good introduction prior to employment with the Commission, and aided the graduates to gain a good, overall summary of highway operations.

"WAY OFF YONDER IN
GRANDFATHER'S GLOW
WHO'LL TAKE THE HIGH WAY
AND WHO'LL TAKE THE LOW?



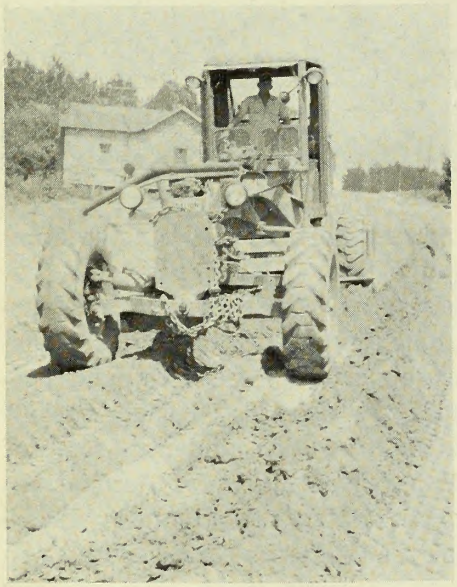
Warren County

Construction Scenes



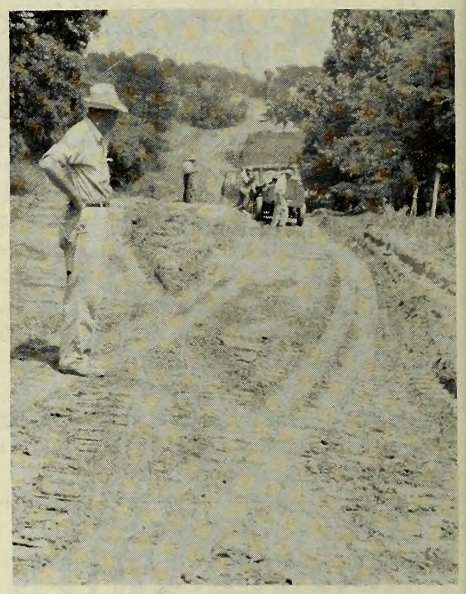
Top left: J. H. Beddingfield, Warren County Maintenance Supervisor, watches progress on Warren Street Extension.

Bottom left: L. L. King, Machine Operator III, begins another day's work with a lot of sun, dust and hard work to face.



Top right: G. B. Rose, Machine Operator II, starts cutting a hill on Secondary Road 1326-1332.

Bottom right: J. T. Robertson and H. M. Tharrington look over a rock problem on the Warren Street Extension project.



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Merry Christmas



Once Upon a Christmas Eve . . .

Twas the night before Christmas
And all 'round the State
Employees were gath'ring
For an egg nog break.

Up in Ahoskie, The Chairman began
To open his gifts from the Highway Clan . . .
All wrapped up in concrete and asphalt trimmings,
Tied up with brick and steel-plated ribbings.
Aghast at the gift—14 karat gold trim,
Merrill Evans saw what we'd given to him:
A highway which ran across the whole state—
NORTH-EAST-SOUTH-WEST — that ends the debate!

Down in the East, Mr. Patrick was fine
Santa had brought him a new ferry line.
Atom powered it was—a real special treat;
He has an atomic ferry fleet!

The Geologist Dodson was all a grin
The bones they had found belonged to a hen.
But wouldn't it be a most strange sight
If all of our highways were built from graphite?

Our dignified Commissioners were all outside
Planting little roads along the wayside.
We know they try hard to please everyone,
But golly, gee whiz, it ain't much fun.
They tour everywhere, see county roads,
People want streets by their abodes.
But in December they will be merry—
No more meetings until January.

Up Sylva way things were fine
The roads were covered with bright sunshine
F. L. Hutchison's face was aglow!
He's hoping and hoping it just won't snow!

Two noted showmen in a Broadway troupe
McGowan and Jackson and all their group
Started out to see the North Pole
But alas, alack, the road had a toll!
They started to hold a hearing by phone
But its color was green—
And that ends this verse but quick . . .

D. B. Sutton is having a fit
Santa has asked for a special permit
He wants to ride his sleigh with its load
Down a brand new weight restricted road.

The Director is hanging his Yule decorations
No worries to dampen his bright preparations.
The 5th Highway Conference is ready to go,
From what we hear, it's quite a show!
The Miami Swim Club will be here to play—
With them here to lecture—forget the highway!

We peeked in just to see
How was General Hardesty
On his tree instead of stars
Were two more bright, gold, shiny bars!

Rhudy and Litchford are watching a pest . . .
Seems a man in a sleigh is doing his best
To fly real fast—oops he's out of control,
He just hit a plane marked "Highway Patrol".
We know this problem could make you cry—
Aren't you glad that cars can't fly?

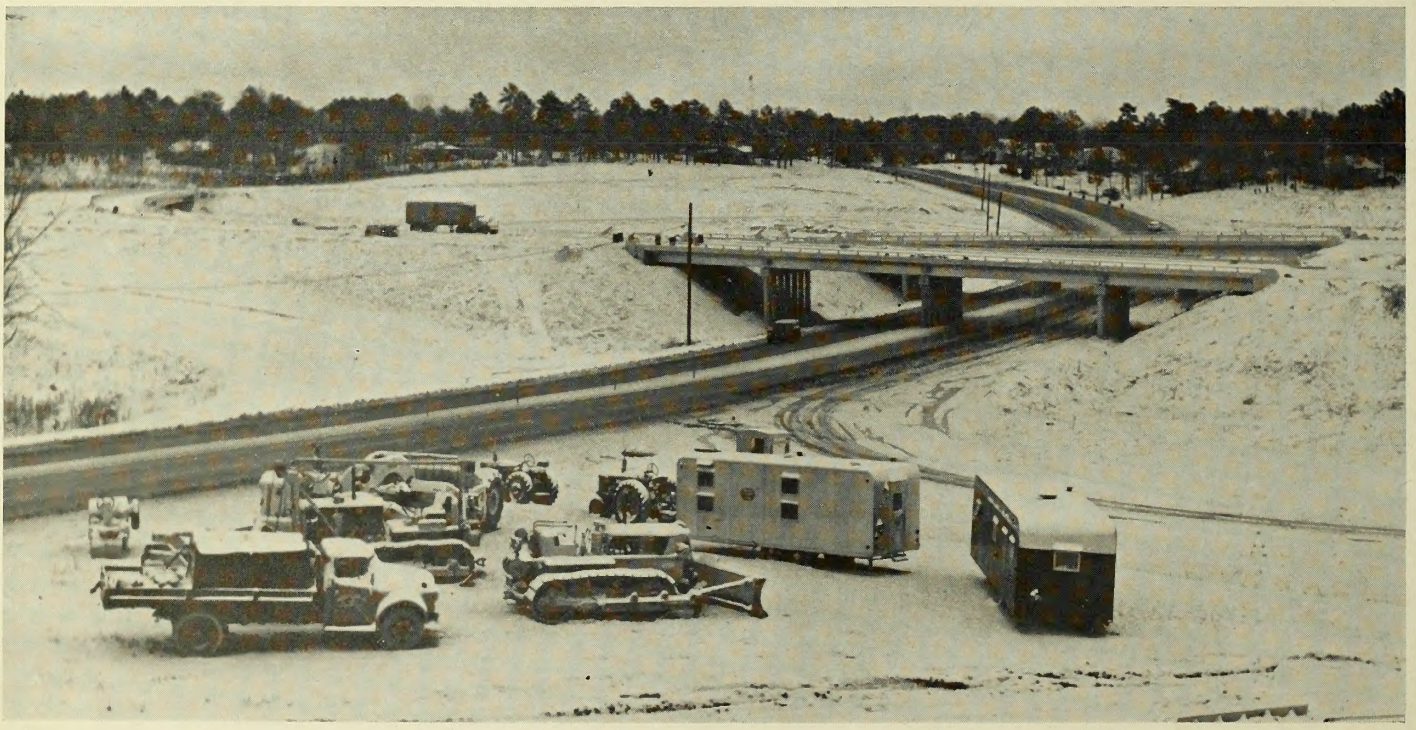
We hope you've enjoyed our Christmas Eve spree
Good luck and good health in '63!

A. C.

JANUARY

In January . . .

Two long-time foremen, Thad S. Guy and Rodney Hemphill retired . . . Road crews have a busy time clearing roads of ice all over NC . . . Plaques were ordered for the Harry Davis Bridge on NC 14, south of the Morehead Memorial Hospital . . . Fisherman were complaining because of the fences around Lake Norman . . . Right of Way work on Lee Highway hits a snag . . . Graphite and bones uncovered on Interstate Route 85 . . . Knotts Island request ferry service . . . The Oregon Inlet bridge receives low bid of $3,977,333 . . . Governor Sanford address Fourth Annual Highway Conference and calls Daniel Boone one of North Carolina's earliest highway engineers! . . . New markers were installed on Highway 28-70 between Greensbor and Lexington . . . and people were discussing toll roads . . . R. R. Trevethan was still talking about his trip to Washington to visit his son Henry . . . Jo Ann Turner and her family had been to Winston-Salem . . . The C. W. Grissoms in Division Seven were the proud parents of a baby boy . . . W. H. Taylor was starting out on a well deserved retirement after working with the Highway Commission since 1922 . . . And the year began . . .



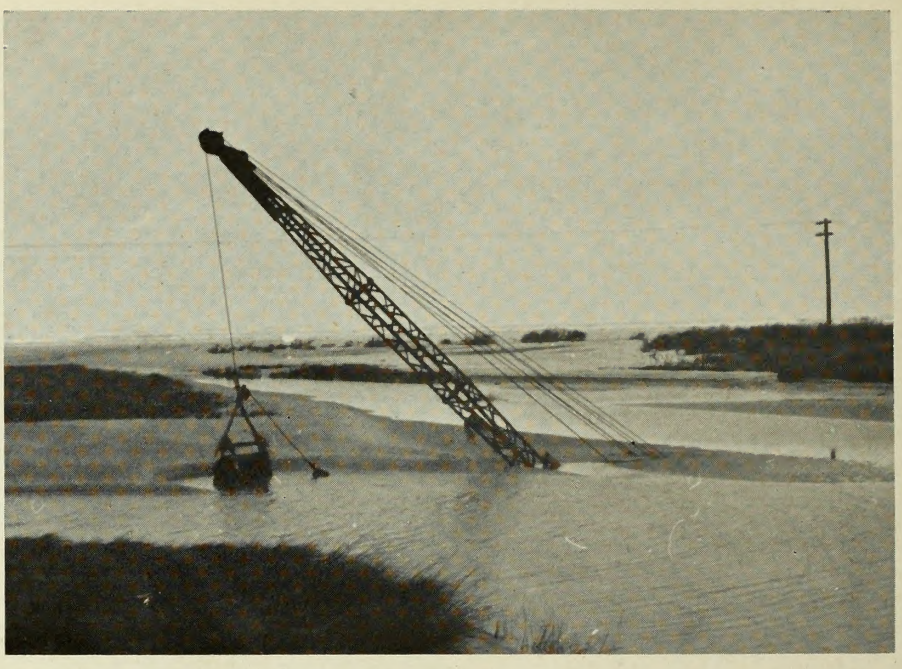
FEBRUARY



In February . . .

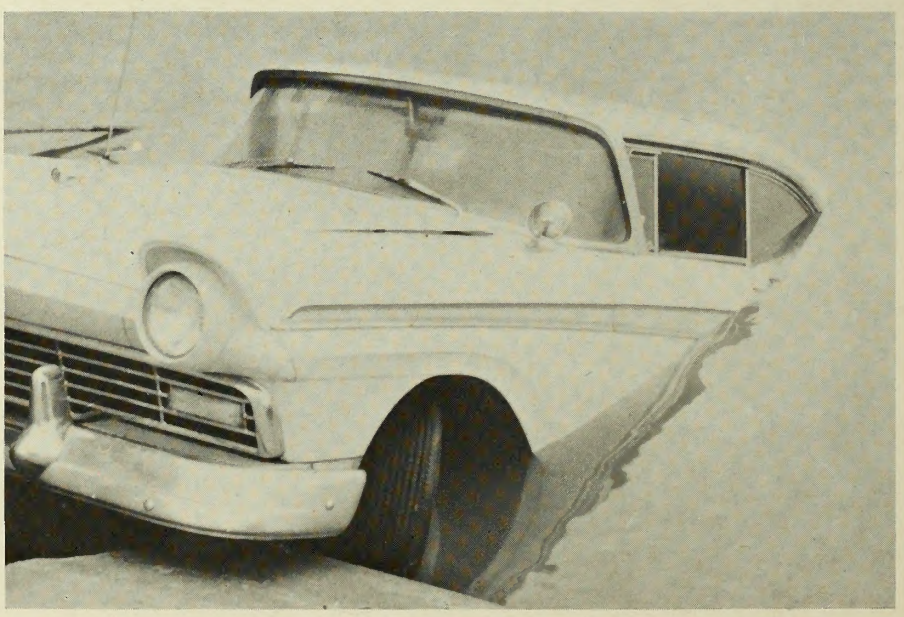
Broken propeller shafts on two of the four ferries at Oregon Inlet and Hatteras seemed to forecast a busy season for Ferry Operations Manager D. W. Patrick . . . Fossils and graphite turned up in I-85 . . . Commissioners Wood, Bell, Faircloth and Elliott made a north-south tour of US 17 . . . Lots of public hearings . . . Fred Beck became District Engineer II in Division 8 . . . Mayo Morehead in Division 12 was was having fun driving her Thunderbird . . . a young man was causing a lot of happy confusion in the home of Mr. and Mrs. Henry Jordan in Division 8 . . . Eugene Olive had left North Carolina National Bank and began work in the Highway Personnel Department in Raleigh . . . Snow had covered most of the Tar Heel State . . . Nation Geographic Magazine featured North Carolina in its February issue . . . G. W. Beam's suggestion for improvement of road working signs wins an award . . .

MARCH



In March . . .

Donald Overman in Division Four returned from the Radiological Defense Course for Instructors . . . Roy Jester retired after 20 years of service in Division Eight . . . The "Sea Level" began its initial run on March 6th . . . The bridge burned by firecrackers was opened to traffic . . . Ferry Service between knots Island and Currituck was approved by the Commission . . . Storm lashed coastlines on the Outer Banks brought emergency crews out for a lot of hard work . . . C. S. Biggs, Bridge Maintenance Department, retired after 40 years with the Commission . . . Tamera Lynn Leazer was kicking up her heels in Division Nine . . . Mr. and Mrs. George Brinkley were planning a trip to South Bend, Indiana to visit their son George who was Associate Professor of Political Science at Notre Dame University . . . The Highway Research Program at State College was given an additional $75,000 . . . The bridge over the Hiawassee River was named in honor of Senator Frank Forsyth of Cherokee County . . .





APRIL

In April . . .

LeRoy V. Jay was chosen "Civitan of the Year" in Raleigh . . . In Division Ten, Ted Funderburk went down to Atlanta for the Masters . . . Iredell County employees had a barbecue near Statesville . . . Plans began for the dedication ceremonies for the Lindsay C. Warren Bridge . . . The Commissioners gathered in Charlotte on Friday, the Thirteenth . . .

M A Y



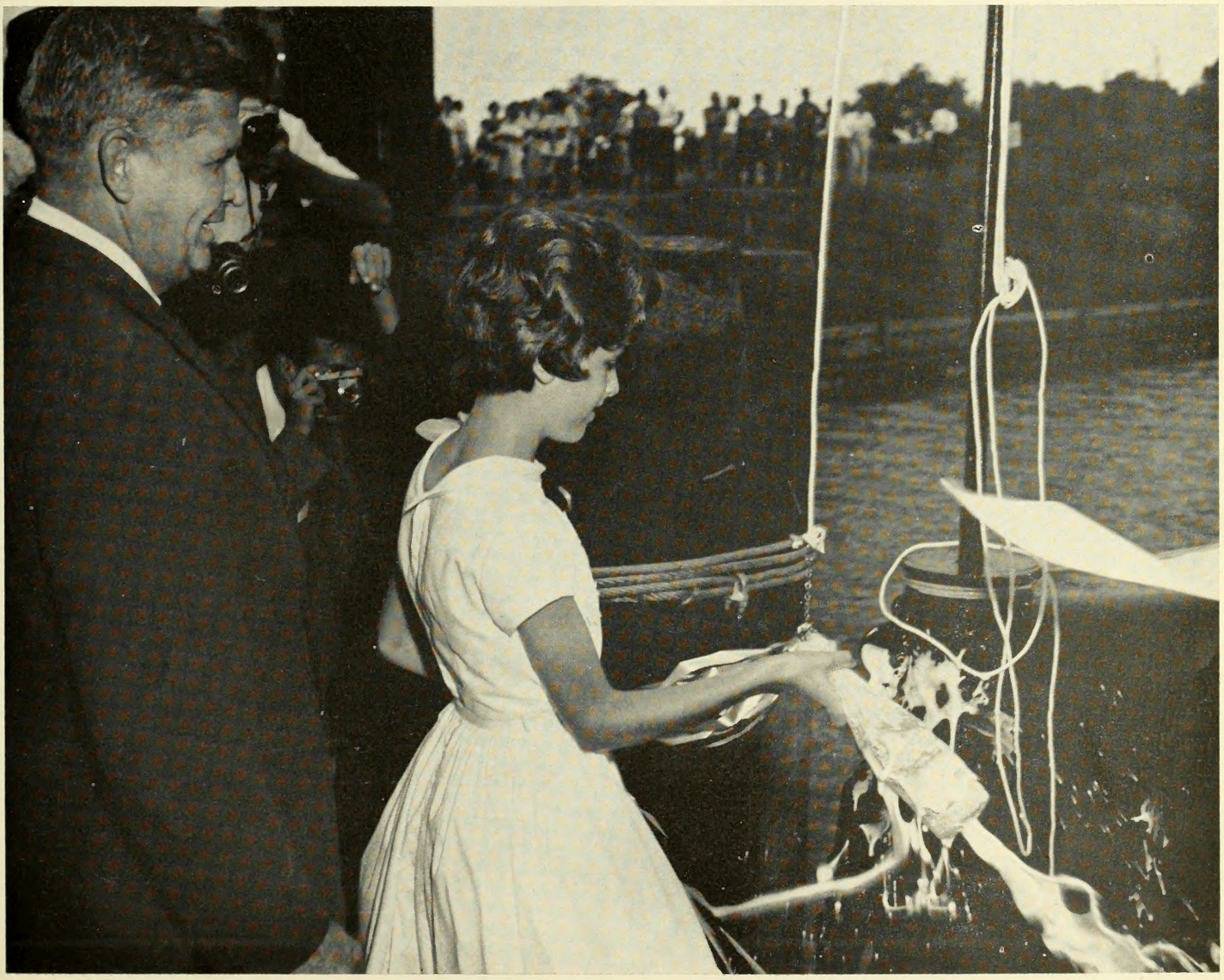
In May . . .

National Highway Week was celebrated across the nation . . . Dignitaries arrived for the dedication of the Lindsay C. Warren Bridge . . . Governor Sanford outlines plans for "Project Impact" . . . the Commissioners were meeting in Charlotte . . . J. S. Burch took a long look at that Long Road from Durham to Greensboro . . . Lloyd Cook said the black and white maps were ready for distribution . . . A new Interstate Construction Schedule was released . . . Conrad Wirth and Hugh Morton won awards for a new song "Now you take the high road and I'll take the low . . . " . . . Right of Way employees held their first annual golf tournament . . . Shirley White and her roommate sailed for Bermuda . . . Rose Marie Melvin was born on May 23 in Division 6 . . . Twin granddaughters were born to Division Engineer W. W. Wyke . . .

In June . . .

An Australian highway engineer visits North Carolina to see "highways on top" . . . T. J. McKim announced plans to retire . . . R. V. Biberstein is named Division Three Engineer . . . A northeaster hits the coast again—more emergencies . . . dredging begins for the Currituck Sound ferry slips . . . Mary Frances Grotgen, daughter of J. F. Grotgen, graduated from New Hanover High School . . . Jewel Adcock and her husband Jim were off to Virginia Beach . . .

JUNE



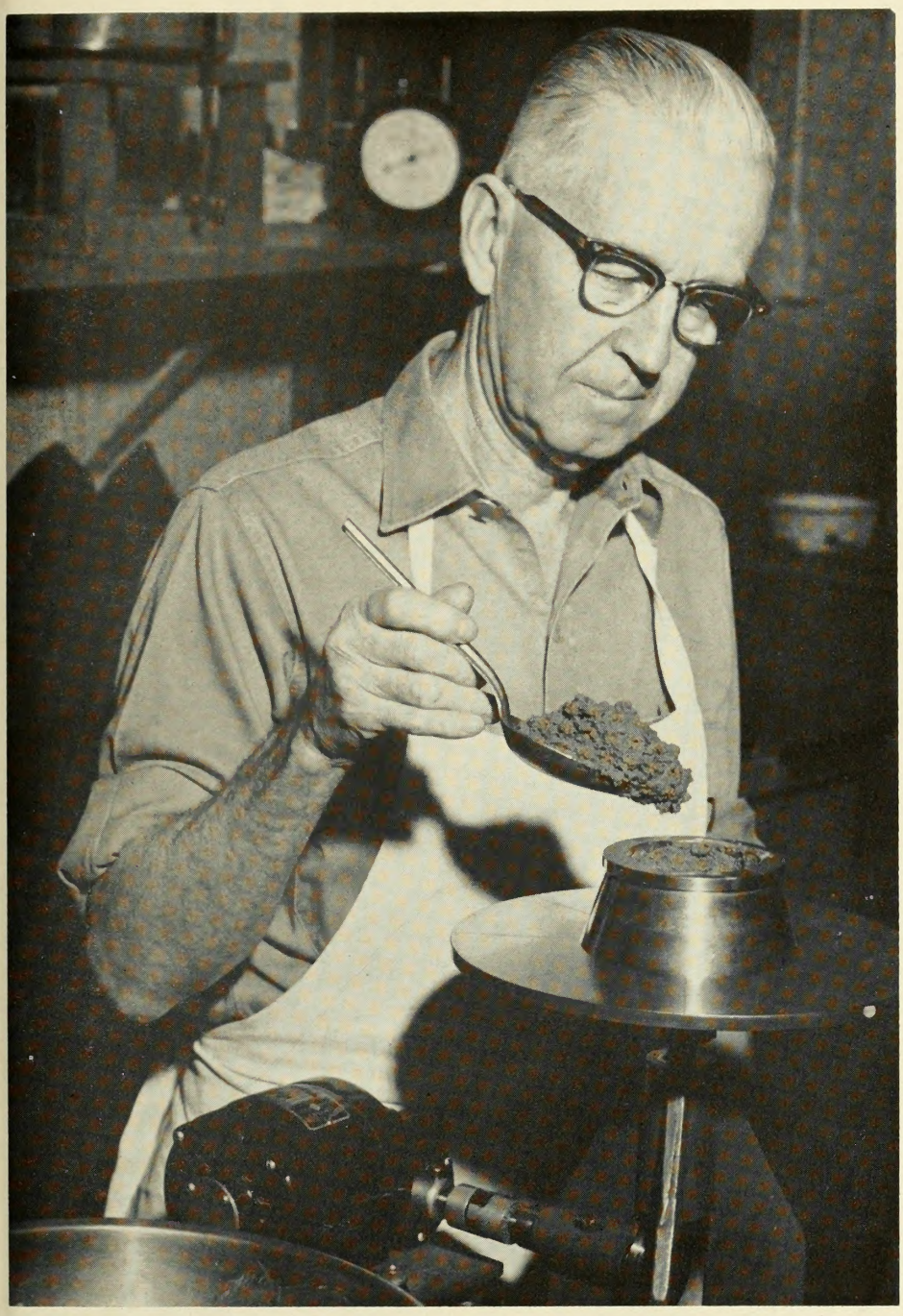
JULY





In July . . .

Jimmie Brown was named State Area Maintenance Engineer . . . "Project Impact" forces begin their safety drive . . . D. G. Bell conducts a public hearing in Bayboro . . . Heber Gray retires . . . Andrew Nesbitt from Fairview, N. C. replaces Yates Bennett as Highway Commission from Buncombe, Haywood, Madison and Yancey Counties . . .

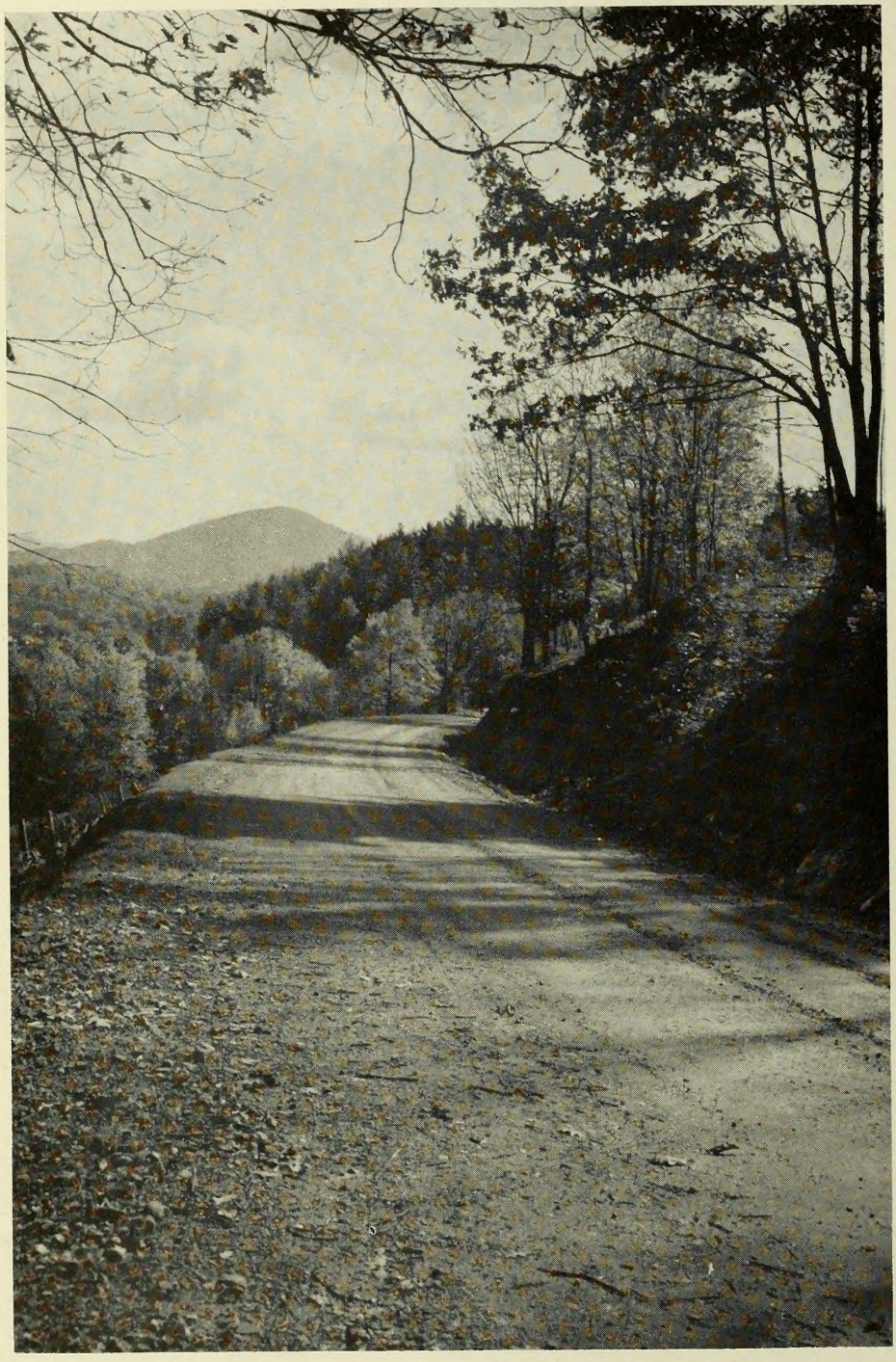


AUGUST

In August . . .

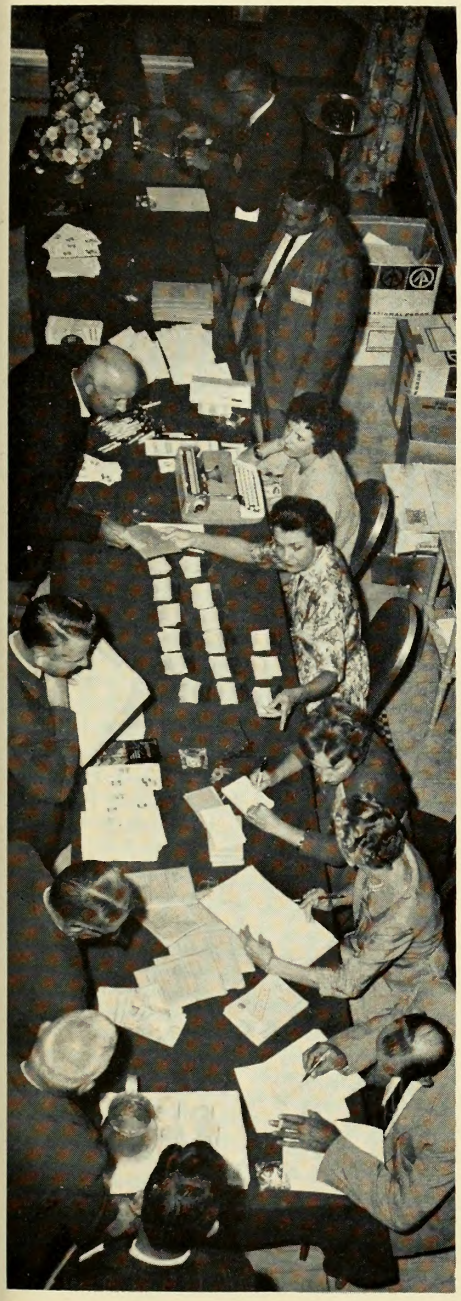
"Project Impact" drives across some driveways . . . R. W. McGowan and Roger Jackson attend their 23rd Public Hearing for 1962 . . . James Litchford was named State Traffic Engineer . . . Andrew Nesbitt was sworn in by Governor Sanford as the new Highway Commissioner . . .

In September . . .



SEPTEMBER

O C T O B E R





S H P E A CONVENTION

WINSTON-SALEM







October—
Continues . . .

Harriet M. Berry, "Mother of Good Roads" in North Carolina was honored with the installation of a plaque and dedication ceremonies at the Highway Building in Raleigh . . . Employees from all over the state gathered in Winston-Salem for the annual Highway and Prison Employees Convention . . . a four lane section of US 70 from Garner to Raleigh was opened to traffic . . . Harry J. Phillips was sworn in by the Governor as our new Commissioner from down east . . .

In November . . .

Merrill Evans and Mayor Darden were keeping their secretaries busy . . . The largest letting in the history of the Highway Commission was held . . . Secondary Road books were nearing completion . . . 40 years serviee pins were presented in Raleigh . . . the Commissioners had their last meeting until January, and everyone surely looked happy . . . People were beginning to make plans for Christmas . . .



40 YEAR SERVICE AWARDS

Shown in the photograph above, left to right, are the men and members of the Commission who were on hand for the event: Thomas R. Buchanan, T. C. Hartman, Cecil Stearns, Charles S. Biggs, Dewey A. Dickens, Jack Spruill, R. V. Biberstein, Hunter Irving, W. N. Spruill with Merrill Evans.

Included in the presentation were four division engineers and six employees of the Raleigh offices.

Ten employees of the State Highway Commission received 40-year service pins and a large audience in Raleigh was on hand to extend congratulations at ceremonies held Thursday morning, November 29, 1962. Assistant Chief Engineer Ivan Hardesty presented the lapel pins to the men and praised them for their unstinting contribution of time and talents.

NOVEMBER

For Bosses - - -



A TWO DAY WORK WEEK

Merry

Christmas

"For Us Folks"



A TWO HOUR COFFEE BREAK

TO MAP A STATE

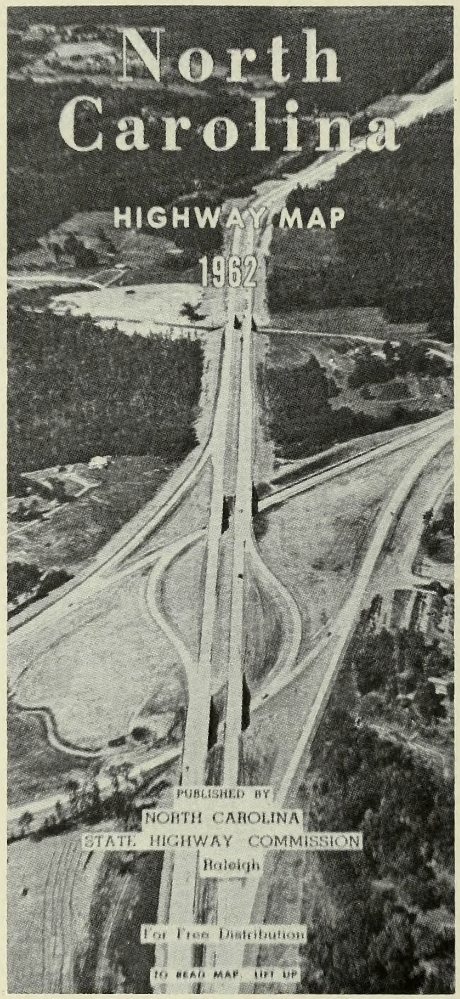
"Let's stop by a service station and pick up a free road map." It is very seldom that a motorist gives a thought to the original source of the map, who made it, where the information came from, or how much it cost to draft it.

The truth is that the original source of almost all maps seen by the public is the State Highway Department in each of the states across the nation. They are the people who locate, design, build, maintain, and operate the highways, almost all of the expressways, and a large percentage of the "country" roads and major city streets. To do this, they must have accurate, complete, and up-to-date maps in great detail. They make the original basic maps themselves and constantly revise them.

The **basic** maps are county maps — often of even smaller areas — handmade to great accuracy, requiring the assembly and constant revision of a vast amount of detail data. Even the rural houses, local schools and churches are catalogued and shown. Every road, even minor local roads, creeks, railroads, airfields, lakes, mines, lookout towers, and streets are located and shown on the maps. For the average state, literally a million items are exactly located and carefully shown on perhaps a hundred county base maps.

The county maps are constantly used, not only by the officials, engineers and foremen of the State Highway Department, but by scores of other public and private organizations. Among these are such agencies as agricultural, soil, crop, fishing, fruit, school, health, military, civil defense, enforcement, emergency, conservation, forestry, parks, water supply, wildlife, and many others. Among private businesses and corporations are those in the fields of telephone, electric power, mining, pipelines, radio, television, truck - hauling, busses, construction, real estate, airlines, door-to-door selling, and church groups.

Each State Highway Department also makes a single state map, showing only the main highways, cities, and rivers; and distributes these for the guidance of motorists, truck and bus companies, motor clubs, hotels, Chamber of Commerce, travel agencies, and the general public. These state maps are made from the county maps.



Both state and county maps are made available to large national firms in the business of making maps for sale. Among these are Rand McNally, General Drafting Company, Gousha, and others. The petroleum companies contract with these map companies to make and to furnish them with supplies of travel maps by the hundreds of thousands. The map companies use the state and county maps as basic information in their map publication work.

How is a county map made? It is not practical to send surveyors out to measure the meanderings of all the local roads, creeks, rivers, and railroads—some shorter method is necessary. While these methods vary in various states, the procedure used by the North Carolina State Highway Commission is typical of the use of most modern map-making techniques.

First, an impossibility must be faced. A flat map cannot precisely represent the spherical shape of the earth. Only a globe can do this. If we try to flatten a section of orange peel, it cracks in the process. So in making the maps, a compromise is reached by using a "projection" such as Mercator, Lambert, or some other. Grid lines of longitude and latitude are laid out on blank paper or plastic, being slightly curved to fit the particular small part of the earth's surface to be covered. Now, geodetic monument locations are plotted on the grid. These monuments are points of precisely known latitude and longitude position, surveyed by State and Federal agencies over the last hundred years, to enable locally made surveys to tie-in to each other and to the coordinate system.

Now that we have the grid and the monuments plotted, we turn to the county lines and establish them on the grid, as near as their descriptions will permit. In many cases, the true county line location is very old, inadequate, and vague. In such cases, the locally accepted boundaries are the best information available. At any rate, each county boundary is plotted exactly to fit its neighbor counties.

In Memoriam

DANIEL GRAHAM BELL

August 9, 1913 – October 8, 1962

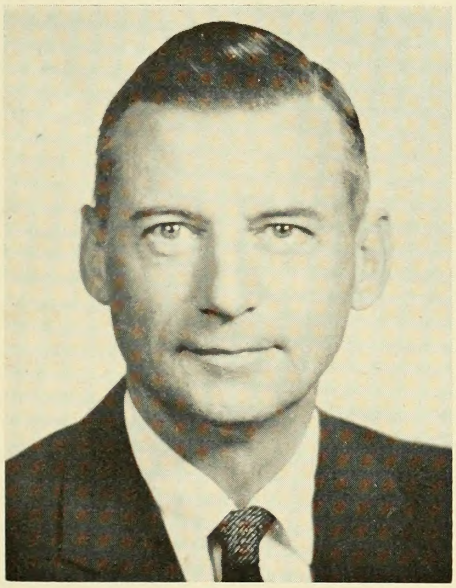
OUTSTANDING CIVIC LEADER

WAR HERO

LEGISLATOR

HIGHWAY COMMISSIONER

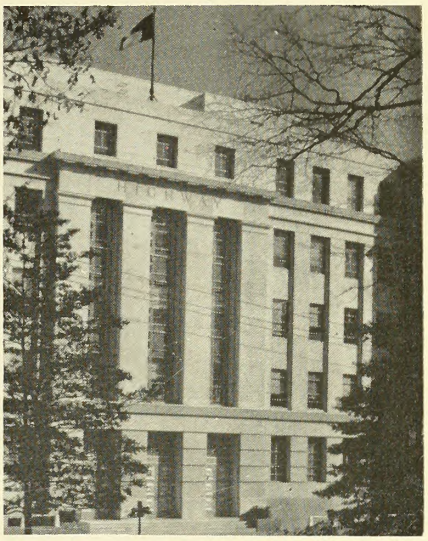
"He gave much to his fellow man"



JAMES O. LITCHFORD was named State Traffic Engineer on August 30, 1962. He was formerly Project Engineer in the Roadway Design Department of the Highway Commission, and is a graduate of N. C. State College in Raleigh.

He is married to Marguerite Jones of Mt. Airy and they have two sons, James Jr., and Henry.

ROADWAYS MAGAZINE



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